

A landscape photograph featuring a bare, dark tree on the left side, its branches reaching across the frame. The background consists of a bright blue sky with scattered white clouds and a vibrant green field in the foreground. The overall mood is serene and somewhat melancholic due to the bare tree.

E l e m e n t s

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ELEMENTS

President Dr. Marcia Hawkins said at the CIRCLES ceremony and again at Opening Convocation 2012-13: We would spend this year exploring our story, our core. Yearbook decided to take this seriously: What is Union physically? Where are we? Who is Union? What are those stories? We document this metaphorically applying the basic universal elements from Chemistry. More literally, we have tried to tell as many individual stories as would fit between these covers.



Elements

2012-13

Stespean, Volume 74

Union College

310 College St, Barbourville, KY

(606) 546-4151

(606) 489-8646

<http://www.unionky.edu>

Undergraduate Enrollment: 830

ELEMENT 1: People

1
Peo

Dynamic, evolving, hardworking, intelligent, funny. Includes some stabilizing protons within the faculty and staff. The ever changing electrons provide this element with high energy.

1 H Hydrogen 1.0079								
3 Li Lithium 6.941	4 Be Beryllium 9.0122							
11 Na Sodium 22.9897	12 Mg Magnesium 24.305							
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.9559	22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.9332
37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.9059	40 Zr Zirconium 91.224	41 Nb Niobium 92.9064	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.9055
55 Cs Cesium 132.9055	56 Ba Barium 137.327	57 La Lanthanum 138.9055	72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217
87 Fr Francium (223)	88 Ra Radium (226)	89 Ac Actinium 227.03	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (277)	109 Mt Meitnerium (268)

58 Ce Cerium 140.116	59 Pr Praseodymium 140.9077	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25
90 Th Thorium 232.0381	91 Pa Protactinium 231.0359	92 U Uranium 238.0289	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)

								2 He Helium 4.0026					
								5 B Boron 10.811	6 C Carbon 12.0107	7 N Nitrogen 14.0067	8 O Oxygen 15.9994	9 F Fluorine 18.9984	10 Ne Neon 20.1797
								13 Al Aluminum 26.9815	14 Si Silicon 28.0855	15 P Phosphorus 30.9738	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 Ar Argon 39.948
28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.409	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.9216	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798					
46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6	53 I Iodine 126.9045	54 Xe Xenon 131.293					
78 Pt Platinum 195.078	79 Au Gold 196.9666	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.9804	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)					
110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (277)											

65 Tb Terbium 158.9253	66 Dy Dysprosium 162.5	67 Ho Holmium 164.9303	68 Er Erbium 167.259	69 Tm Thulium 168.9342	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967
97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

The Garretts

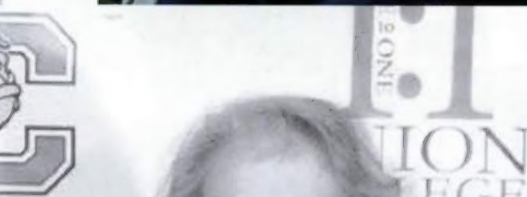
For over twenty years Dr. Jim Garrett and his wife Melissa Garrett have been impacting lives across the Union College campus. Dr. Garrett is an English professor and Mrs. Garrett is Associate Professor of Library Science. Although both have different roles here at Union, it is obvious they have the same goals.



In 1988 Dr. Garrett earned his Ph.D. from Auburn University and shortly after he began his career at Union College. He stated, "I put in so many applications I actually forgot I had applied to Union. When I got the call for an interview, I thought it was to Southern Union in Auburn. It didn't take long for me to realize I was thinking about a different school."

Two years later Mrs. Garrett began her journey here as an adjunct professor. She completed her M.L.S at the University of Alabama in 1986, and began working as a part time librarian in 1991. She continued this until 2001, when she became Associate Professor of Library Science. She completed her Master of Arts at Union in 2003.

Dr. Garrett stated, "Some of my best memories are from good classes, good students, and good friends. I like being able to serve and work with people. I used to say I would teach for free, because it has never been about the money." Anyone who has had Dr. Garrett in class would agree with the statement: He will go above and beyond for you. He does whatever it takes to see students succeed.



When asked about some of her favorite memories, Mrs. Garrett said, "Of course, the relationships I have made here are important, regardless if it's with a student, colleague, or alum. But I also love the fact that there are so many options at Union; you are not restricted to one area and have the freedom to explore."

For example, Mrs. Garrett began as an adjunct teacher, but she has worked with student teachers, she was a teacher educator for KTIP, and she is a much sought after advisor on campus. She is a prime example that you can have more than one role at Union.

Both Garretts agree the students have impacted their lives tremendously. Mrs. Garrett said, "I am amazed at how interested students are in learning. I can still remember exceptional papers written twenty years ago."

Dr. Garrett added, good students have made his job more enjoyable.

During their time here at Union, both hope they have made a difference in students' lives both personally and academically. Mrs. Garrett stated, "I hope I am seen as someone who cares about the individual and that I come off as someone available to help."

Dr. Garrett has received two different teaching awards, but the notes from his students have meant far more to him than any award ever could. He went on to explain, "I feel these notes have proven that I've impacted lives."

When asked what they would miss the most Mrs. Garrett expressed, "what's not to miss about Union: the connections, the campus, colleagues, students, alumni, and Barbourville itself." Dr. Garrett added he would miss the feeling of having a really good class and being able to teach important things to students. With this being said, we will have to say our goodbyes to Dr. and Mrs. Garrett as they begin a new chapter in their lives in their home state of Alabama. They may be leaving Union, but they will not be leaving our hearts. They will be one part of Union's family who will truly be missed.

By Kayla Lambert

Welcome Weekend



August 16, 2012 at 4:30 in the afternoon, the room is bustling with conversation and laughter as freshman Casey Evans checks in on the first day of Welcome Weekend. Following the new student welcome in the Conway Boatman Chapel, a block party on the school lawn, and freshman seminar team time, this Union College newcomer begins to realize just how much her life is about to change, as she interacts and mingles with other freshman.

The Welcome Weekend experience is for both residential and commuting students, designed to jump start the freshman's first year of college.

Director of Campus Life, Dustin Adams tells us, "It helps students get acclimated to campus, but more importantly, it allows students to start building relationships before they get bombarded with classwork." For residential freshman, the day started off at 9 a.m., as they moved into the residence halls and met their roommates. From 10 until 3, families could go to the Conway Boatman Chapel for the parentibus valedico (a traditional blessing of families). Friday brought a nervous flurry of

excitement as freshmen gathered for confirmation. Casey remembers feeling rushed from station to station. She says, "We had to go to each table in order to make sure we had everything complete so we could begin classes." After lunch, students participated in first year sessions, where they learned about the academic and social expectations required of them as students at Union.

On Friday night, each freshman seminar met in front of campus to create a team name and flag, each using the superhero theme from summer orientation. For Casey, this was an exciting experience. "Our team worked really well together and we came up with a team name without any argument. We were the best heroes of Welcome Weekend, Bruce's Batmen, and our team flag sported the Batman symbol!"

After a full day Friday, the students prepared for a Saturday of various activities. The freshmen could choose between a civic engagement and an outdoor adventure. The civic engagements included Barbourville Recycling, Cumberland Falls State Park, Knox/Whitley Animal Shelter, and Lend-a-Hand. The choices for an

outdoor adventure were rappelling, caving, canoeing on Cumberland River, biking at the Wilderness Road State Park, hiking at Cumberland Gap, Eagle Falls, or Pine Mountain, and a Gap cave tour.

As freshman Darby Martin explains, "I chose to help out at the Knox/Whitley Animal Shelter, and just fell in love with all the puppies." For those who chose the animal shelter community service, the day consisted of feeding animals, cleaning out cages, and bathing the animals. "It was a very rewarding experience," Darby claims. "I could've chosen to go on an outdoor adventure, but caving and canoeing actually sounded a little scary. I was much happier taking care of the animals and would love to help out at the shelter again."

On Sunday the freshman seminar teams competed in the "Battle for the Cowl" which included eight challenges: the driving challenge, dunking booth, water fight, food challenge, trivia game, plank walk, dizzy kickball, and inner tube water polo.

"Water polo was the best challenge!" Casey exclaims. "It was the most fun but also the hardest of all the activities and games. Everyone kept laughing at me because I couldn't stay on the tube!" she laughs.

Following dinner, there was a lip sync contest in front of campus. "Lip sync was our favorite part!" Darby giggles, and Casey agrees. "My team performed Space Jam," she says. "It was embarrassing for me because all of the boys on my team kept jumping around, acting like they were shooting basketballs. It was fun!" Darby adds, "And hilarious to watch!"

Welcome Weekend concluded on Monday, August 20, with morning seminar sessions followed by C.I.R.C.L.E.S. that evening.

By: Toni Terrell and Samson Anderson



Of all the metals in existence, silver is the best conductor of electricity. Silver is what makes photography possible. Silver halide crystals are present in unexposed film.



CIRCLES



James Becknell, a new student from Buckhorn, Ky., was one of hundreds who participated in the C.I.R.C.L.E.S. ceremony August 20, 2012 beginning at the First Baptist Church on Main Street.

Every step that night was one step closer to becoming part of something life changing.

The acronym C.I.R.C.L.E.S. represents a code of ethics the UC family (faculty, staff, administration, trustees, Barbourville community members, the other undergraduates, students' families, new freshmen and new transfers) swear aloud to each other every Fall.



Through this ceremony, the Union community invites new students to become part of the excellence at Union.

James took the oath at the chapel, but "CIRCLES dinner really marked the beginning of my college career," he says.

The acronym stands for Celebrating, Integrity, Responsibility, Character, Learning, Engagement, and Spirituality.

James said, "The night was perfect, the candles, the food, the chapel service, the ceremony."

The evening begins with a savory three-course meal prepared by Don Merriam and his cooks and servers.

President Dr. Marcia Hawkins, students, and others spoke at the chapel, welcoming all guests and delivering messages of success for the Union students.



James said, "I believe the most memorable part of the evening was receiving my medallion." The ceremony ends with new students receiving a medallion as the candles flicker down the sidewalk from the chapel, up the Brick walkway, and around Bulldog Circle.. The medallion symbolizes their choice in becoming part of the UC family. "When I graduate, I am to give it to someone who helped me the most," James states. "As it was placed around my neck, I thought of all the people I could give it to: a parent, a teacher, a sibling, a coach."

"The night really helped ease me into the family feeling Union College prides itself on, leaving me more than ready to begin my new life as a member of the UC family."

Written by Krista Tuta and Seth Bingham



Orientation

Union Freshmen Find Their Inner Hero

Six a.m. Saturday morning during summer vacation is a bustling time during Union College Summer Orientation. Orientation begins bright and early for incoming freshman and the student workers who run them and this year the freshman channeled their inner hero to find the power within themselves. Orientation 2012's theme was UC Heroes: The Power Within. The student ambassadors lined campus with superheroes to represent the new freshman. Summer Orientation is a time to register for classes and get to know the campus a little better. For some students this is their first time at Union



This Orientation marked the first time social media played a big part. The ambassadors advertised the #UCSummerO on Twitter and encouraged the new freshman to 'Tweet' about the day. Their tweets were shown throughout the day on screens all over campus.

Joshua Cox said, "Summer orientation helped me out so much. Not only did it help me learn my way around campus it was a great way to get



College. Alexandra Grant is from Texas.

"It was a little crazy I'll admit, but I knew I wanted to be at Union without even seeing it and after the fun I had at Orientation I knew I had made the right choice. Campus is beautiful and I had a great experience." New UC parents, Alexandria's father included, were very impressed with the campus and the parent panel, a new installation at orientation. Several UC parents answered questions for the new college parents.

UC Student Ambassadors make the new freshman feel at ease with ice breakers like "Birdie on a Perch" and "Train Wreck." All of the previous reservations are gone by the time the freshman start jumping on a complete stranger's back. Students also played games from the popular television show "Minute to Win it." Through the icebreakers students learn to incorporate teamwork into their college preparations.



acquainted with some of my new classmates. I didn't know what to expect. It helped me come to know what Union College was all about. I also had a chance to meet with my coaching staff for both track and football, as well as several teammates from each sport."

Orientation is a time to meet new people, learn about your college, and find your niche on campus.

By: Samantha Caldwell



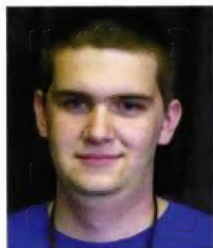
Xenon is the only one of the noble gases to be able to form a compound by burning. It is suspected that because of its large size, this allows for the sharing of electrons that does not occur with smaller noble gases.

Undergraduates





Andrew Abner



Chad Abner



Emmanuel
Acevedo



Archie
Adams



Kimberly
Alexander



Thomas
Alexander



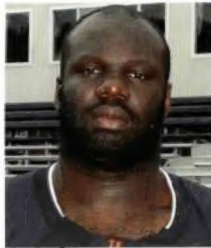
Brittany
Allen



Luis
Ambrosio

No
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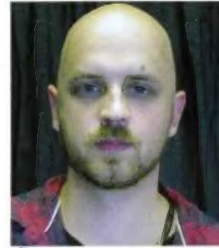
Keshia
Amburgey



Isiah
Anderson



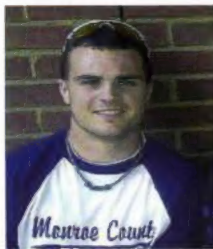
LaVance
Anderson



Samson
Anderson



Rebekah
Anglian



Jackson
Arnett



Candice
Asher



Taylor
Atkinson



Jose
Avina



Steven
Bailes



Brittney
Bailey



Michael
Baird



Emily Baker



Jared Baker



Jaylin Baker



Jeremy Baker



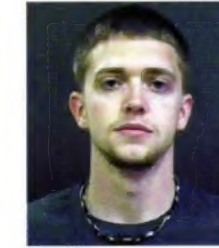
Michael
Baker



Morgan Baker



Nicholas
Baldwin



Jeffery
Banfield



Atiba Baptiste



Jasmine Barbee

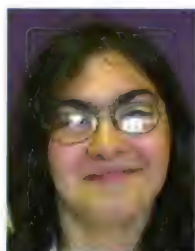


"The simplest element in the universe, hydrogen, is also the most abundant. The second-simplest element, helium, is the second most abundant. The third most common element is oxygen, element eight, not the third-simplest." (29).

Undergraduates



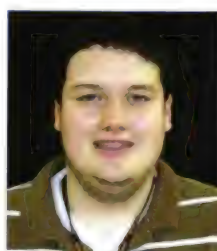
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Barber



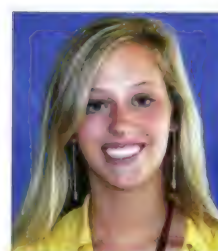
Ana Bardsley



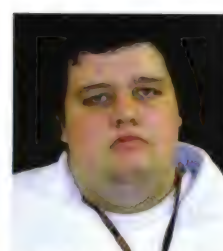
Stephanie
Bardsley



John Paul
Bargo



Kacee Bargo



Paul-Christian
Bargo



Andrew
Barrett



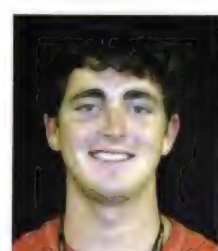
Elizabeth
Barrett

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Shantel
Baughman



Thomas
Bayliss



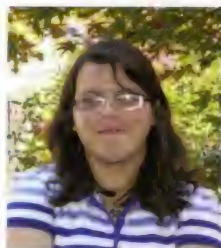
Aaron Bean



Michael Beard



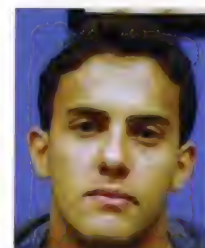
James
Becknell



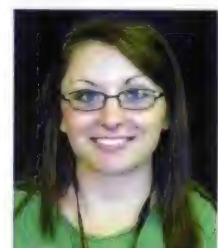
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Bengie



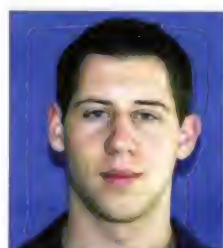
Samantha
Bergman



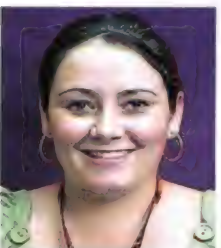
Rafael
Bertholo



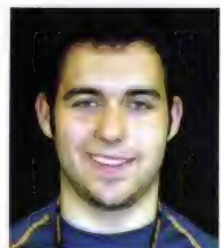
Carrie
Bingham



Justin
Bingham



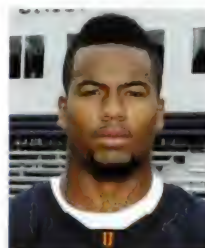
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Bingham



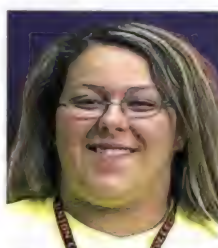
Steven
Bingham



Tamara
Bingham



Christopher
Blackwell



Glenda Boles



Damarcus
Bond



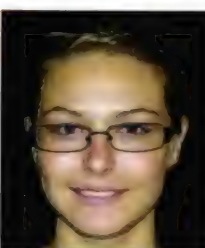
Denise
Borum



Brittany
Boswell



Thomas
Botkin



Ariel Bowling



Bradley
Bowman



Chad
Boyington



Garrett
Bradley



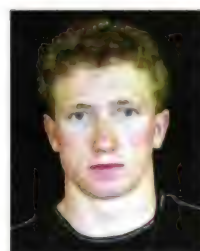
Tyler Brake



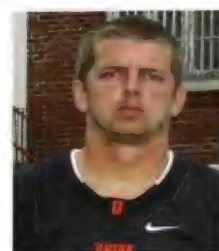
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Brandenburg



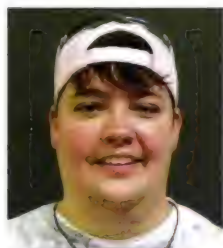
Michael Bray



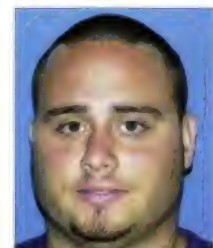
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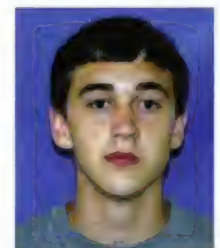
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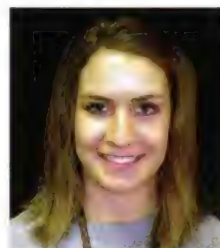
Georgianna
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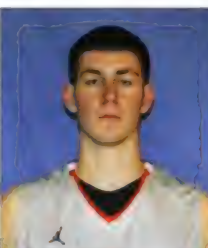
Andrew
Broughton



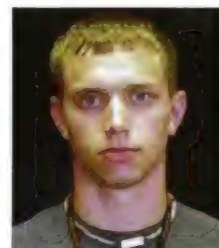
Dillon
Broughton



Holly
Broughton



Tanner
Broughton



Thomas
Broughton



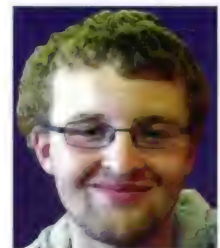
Derrick Brown



Eric Brown



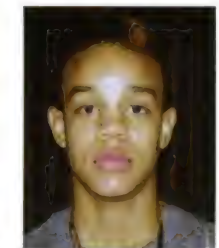
Frederick
Brown



Joseph Brown



Joshua Brown



LuSean Brown



Mikey Brown



Morgan Brown



Rob Brown



Robert Brown



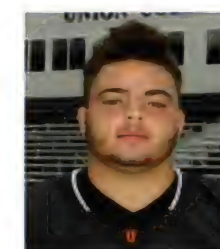
Phillip Broyles



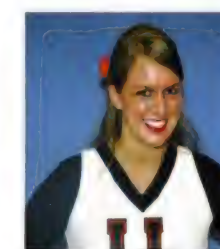
Christian
Bruce



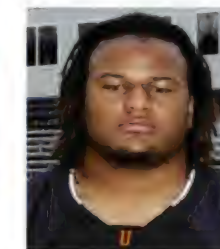
Kassie Bruner



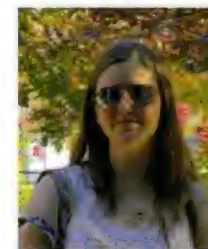
Ervin
Buchannon



Carrie Buck



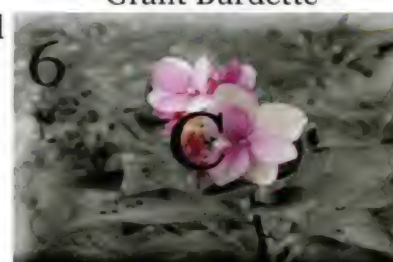
Terry Bullard



Brittany
Burchfield



Grant Burdette



Carbon is a rather promiscuous element. "Carbon must form bonds with other atoms in whatever direction it can. In fact, carbon shares its electrons with up to four other atoms at once. This allows carbon to build complex chains, or even three dimensional webs of molecules." (35).

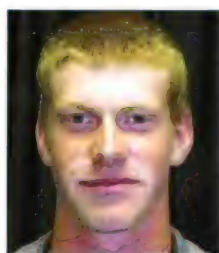
Undergraduates



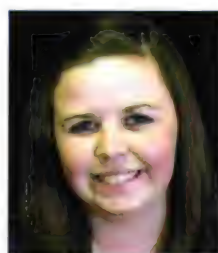
Tiffany
Burdzilauskas



Jennifer
Burke



James Burrell



Brittany
Burton



Stephanie
Burton



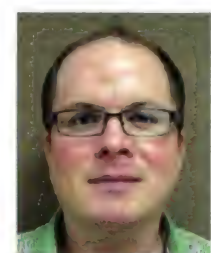
Kyle Bush



Joe Butcher



Ashley Buxton



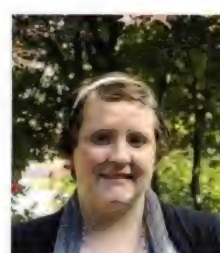
Boyce Byrd



Renata Cabral

No
Photo
Available

Chelsey
Caddell



Samantha
Caldwell



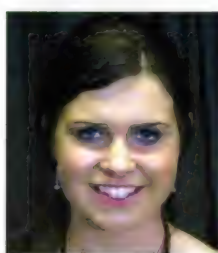
Brittany
Calhoun



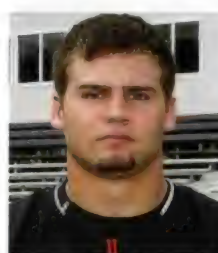
Casey
Camargo



Cameron
Campbell



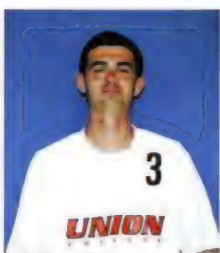
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Carnes



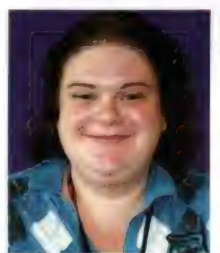
Kory Carter



Tyler Carter



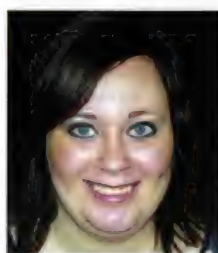
Alfie Caruso



Tiffany
Caudill



Martiño
Cervera



Lauren
Chaney



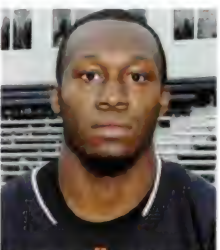
Brian
Chapman



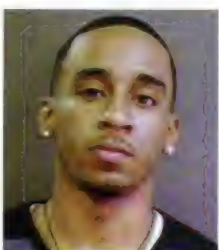
Zachary
Chapman



Sara
Chasteen



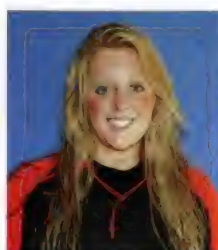
Brian Clark



Brandon
Cleaves



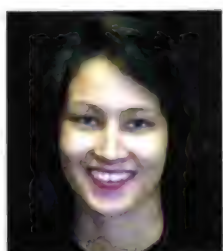
Macy Clontz



Rachel Cogdill



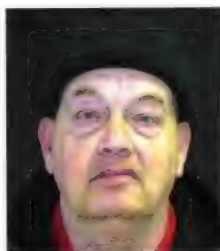
Jontrel
Colbert



Erika Collett



Alonzo Collins



David
Collinsworth



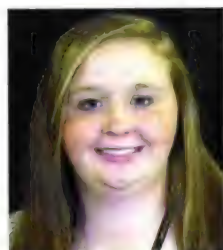
Luke Collis



Chelsi
Comberger



Jonathan
Combs



Erin Cooper



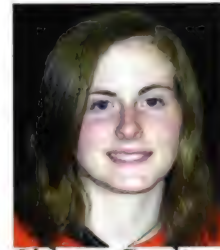
Timothy
Cooper



Kayse Cornett



Corey Corum



Sidney Coulter



Steven Coulter



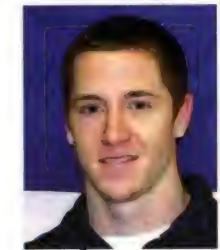
Jonathan
Courtney



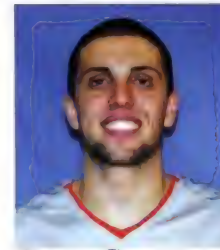
Joshua Cox



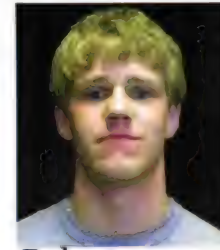
Jamie Cozens



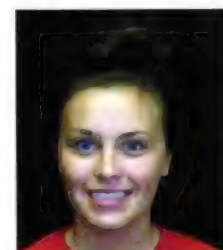
Jacob
Crothers



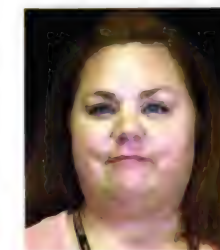
Ryan Crowe



Robert
Crowley



Amanda Cupp



Judy Curtis



Jamie Cyrus



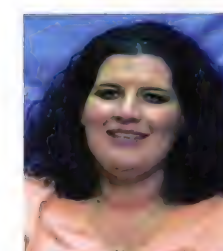
Aline
Dalmedico`



Raymond
Dangelmaier



Lana Daniell



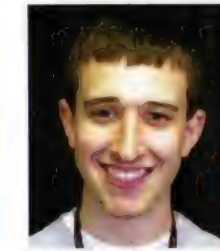
Jerree Daniels



Keondrick
Daniels



Joseph
Davenport



Michael
Davenport



Aaron Davis



Silicone is used for a wide variety of purposes due to it's ability to adhere or release, attract or repel water and be hard or soft. It also remains stable through changes in it's properties (45).

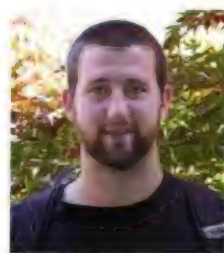
Undergraduates



Anthony Davis



Brandon Davis



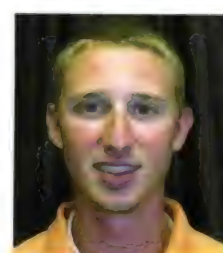
Ian Davis



Victoria
Deaton



Matthew
DeBord



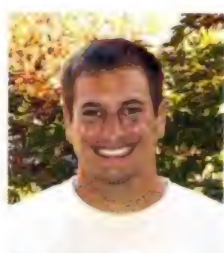
Christian
Decker



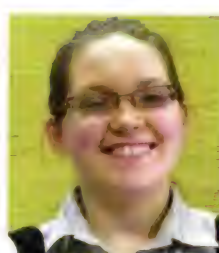
Briana
DeGennaro



Arthur Derico



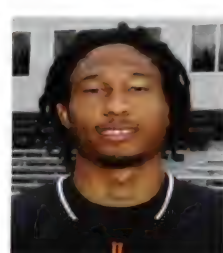
Zachary
Dillman



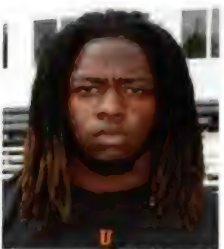
Amanda
Disney



William Dixie



Keenan Dixon



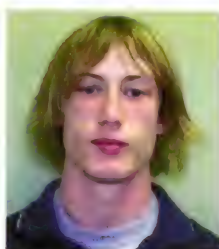
Leonard Dixon



Arthur
Dockery



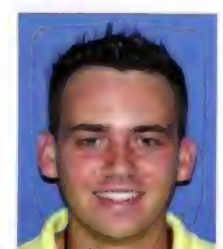
Sean Dockery



Greg Doering



Angelica
Dones



Kevin Doolin



Jacob Dukes



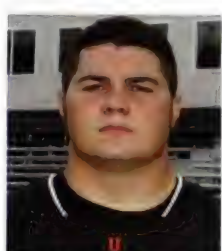
Decorwyne
Dunnaway



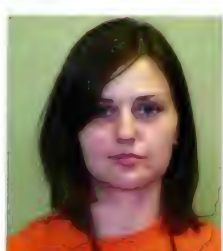
James
Durland



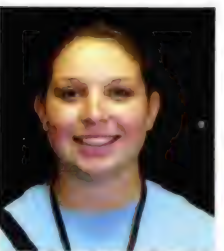
Rolando Dyer



Zachery Eagler



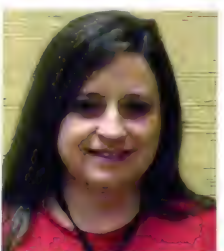
Audrey Earls



Stefanie Edgell



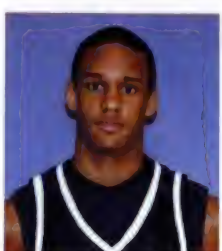
Taylor
Eikenberry



Sandra Elliott



Linsey Ellis



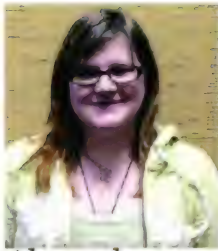
Tyler Ellis



Gregory
Engle

No
Photo
Available

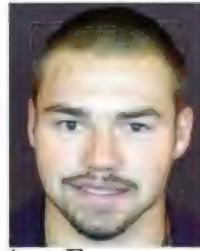
Amy Estep



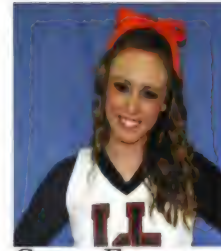
Alexandra
Estes



Tanya
Eustrom



Ans Evans



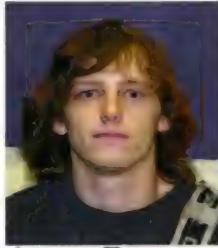
Casey Evans



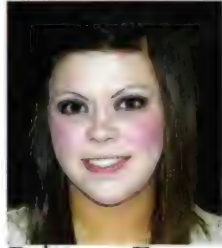
Laurel
Everett



JoAnna Ezell



Aaron Farmer



Brittany Fee



Kendall
Ferguson

No
Photo
Available

Roberta Ferrel



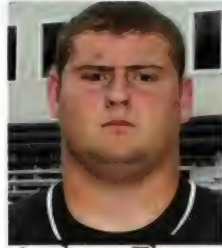
Bradley
Fieldhouse



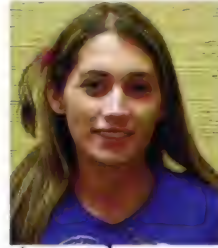
Heather Fields



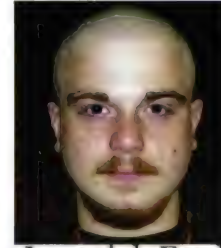
Gabrielle
Fisher



Andrew Flynn



Amanda
Foley



Jeremiah Ford



Marcus Ford



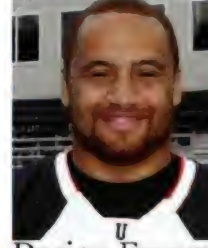
Feiarra Foster



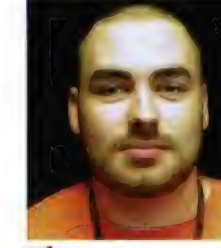
Donna Fowler



Hayley Fox



Darion France



Thomas
Francis



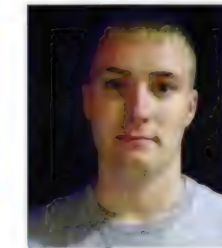
Jordan Franks



Adrian Frazier



Kyle Frazier



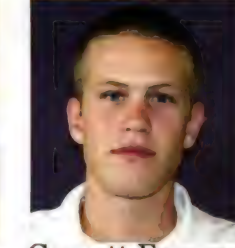
Douglas
Frederick



Jessica Frisby



Hope Frisch



Garrett Fryrear



The Statue of Liberty is composed of 179,000 pounds of copper. Copper is naturally self sterilizing (168).

Undergraduates

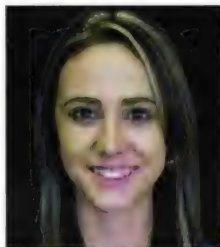




Corey Fugate



Christopher
Fuller



Kayla Fultz



Juan Gallegos



Kenneth
Gamble



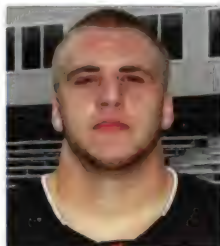
Alvin Gambrel



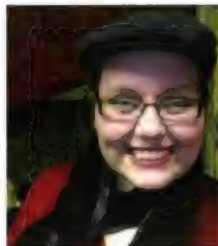
Benjamin
Ganster



Bobby Garland



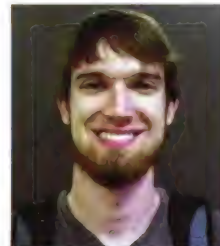
Nicholas
Garofalo



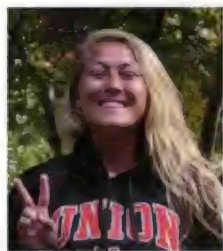
Robin Garri-
son



Katelynn
George



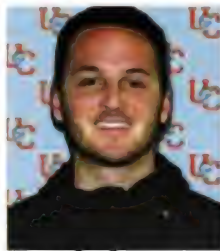
Christopher
Gibson



Danielle
Gilbert



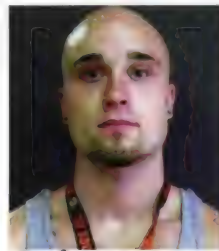
Eric Gimson



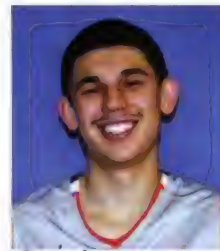
Paschal
Glavinos



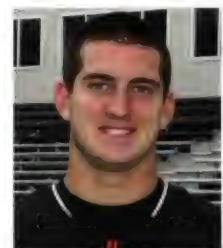
Gregory Goble



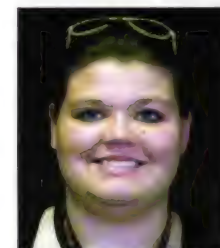
Joshua
Godbout



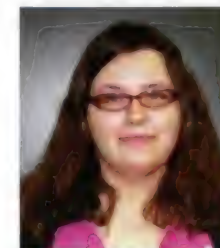
Sergio
Gonzalez



Jared
Goodson



Alexandria
Grant



Casey Gray



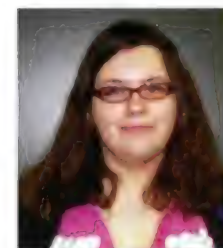
Chandler Gray



Deanna Gray



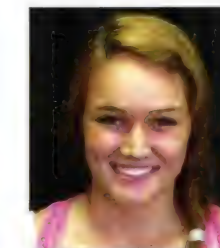
Felisha Gray



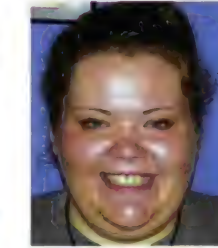
Casey Gray



Kendra Gray



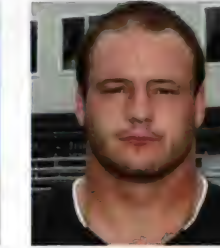
Lindsay Gray



Jessie Green

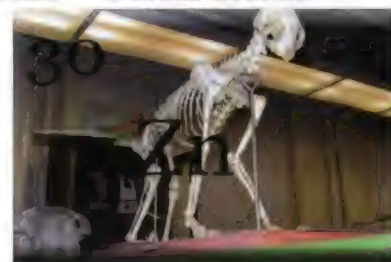


Daniel Greene



Darrin Greene

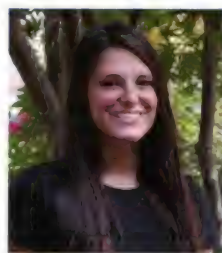
Zinc helps produce white blood cells in the body.
It's also essential for healthy, beautiful skin.



Undergraduates



Derrick
Greene



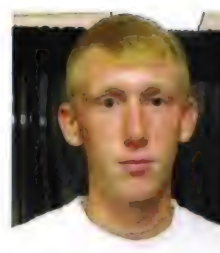
Autumn
Greenwell



Spencer
Greer



Kelsey
Gregory



Tyler Gregory



Justin Griffin



Kaley Griffin



Rebekah
Griffith



Nichole
Grindler

No
Photo
Available

Daniel Gross



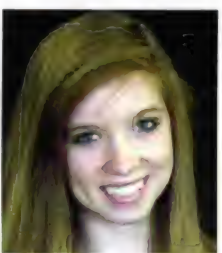
Zachary Gross



Paula Grubb



Tressa
Gumpert



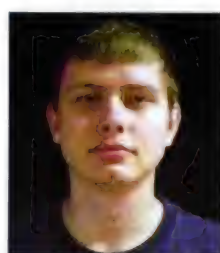
Brittany
Hacker



Wendi Hacker



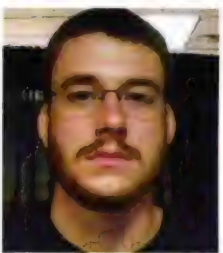
Paul Haley



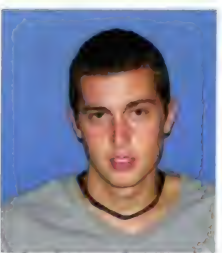
Kenneth Hall



Tyrell Hall



Dennis
Hammonds



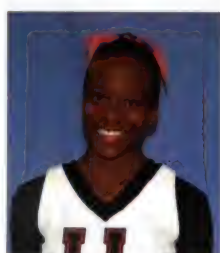
Christopher
Hammons



Kori
Hammons



Alissa
Hampton



Ieshia Hardin



Robert Hardy



Shelby Harp



Ruthanna
Hart



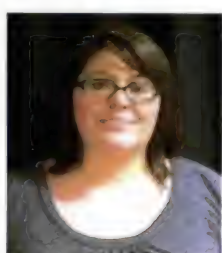
Benjamin
Hartley



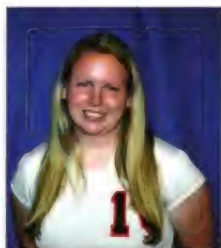
Ashley
Hatfield



Tommie
Hayes



Julia Hearld



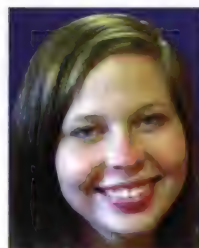
Courtney
Heaton



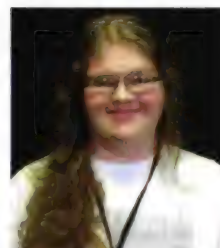
Brandon
Hedrick



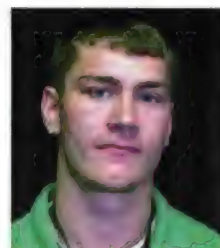
Miranda
Hedrick



Brittany
Helton



Katelyn
Helton



Scotty
Henderson



Russell Henry



Kelli Hensley



William
Henson



Trevor Herd



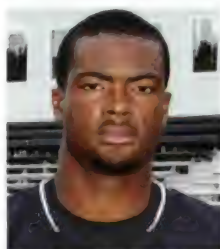
Tyler Hibbard



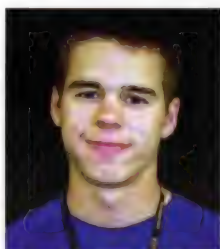
Christa Hicks



DeRon Hicks



Robert
Hightower



Joshua
Hildebrand



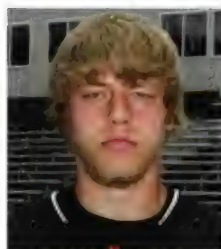
Morgan Hiles



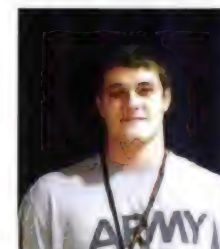
Adrian Hill



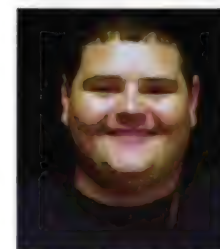
Brooke Hill



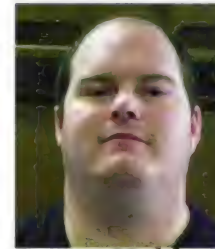
John Hill



Andrew
Hillard



Jeremy Hinkle



James Hobbs



Noah Hodge



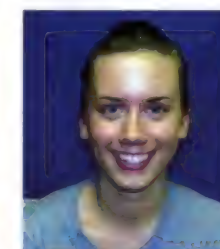
Scott Holman



Nicholas Holt



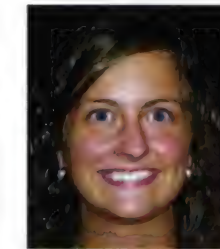
Hollie
Hopkins



Kendra
Hoskins

No
Photo
Available

Monica
Hoskins



Ashley
Howard

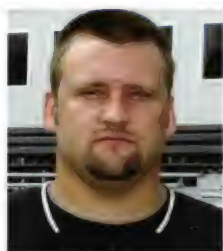


Ellen Huff

Nickel is believed to be the second most abundant element in the Earth's core after iron (100).



Undergraduates



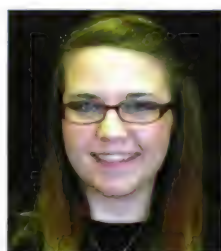
Kenneth
Hughes



Chelsea
Hughett



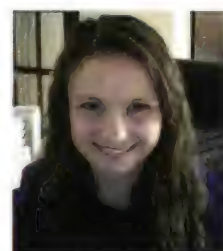
Charles
Hunnicutt



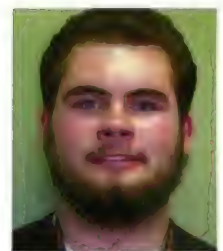
Molly Hunter



Stephen Hurst



Stephanie
Hurwitz



Justin Hyde



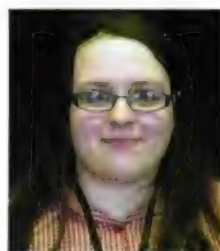
McKenzie Ison



Carla Jackson



Chaqualin
Jackson



Jennifer
Jackson



Regina
Jackson



Shanya
Jackson



Charles Jacobs



Colby
Jamerson



Philip
Janutolo



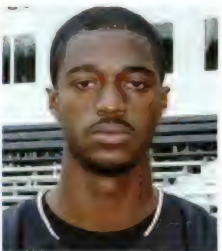
Danielle
Jasiewicz



Nicole Jeck



Adreana
Jefferson



Diquan
Jefferson



Domonique
Jefferson



Ashton
Johnson



Deante
Johnson



Cody Johnson



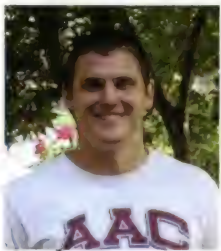
Jordan
Johnson



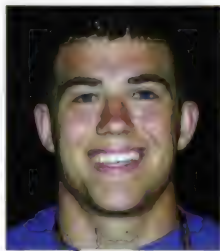
Morgan
Johnson



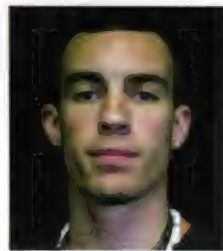
Reed Johnson



Andrew
Johnston



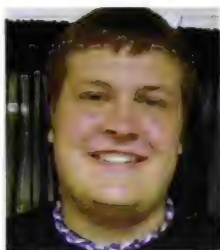
Jacob
Johnston



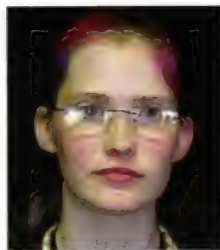
CeJay Jones



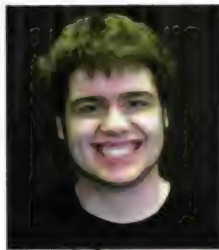
Franchesca
Jones



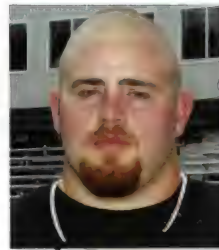
Alex Jones



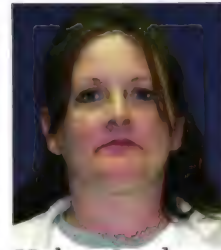
Mary Jones



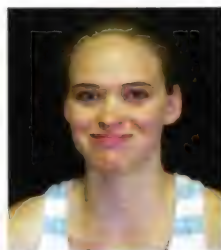
Patrick Jones



Seth Jones



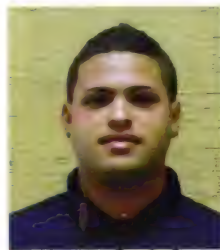
Helen Jordan



Tanya Jordan



Sofie B.
Jorgensen



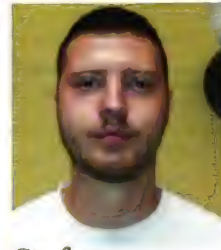
Luis Gabriel
Juarbe



Danielle Judd



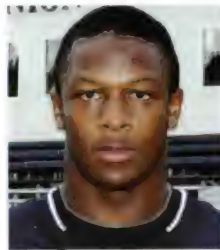
Madison
Justice



Stefan
Juzbasic



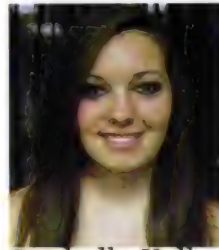
Erin Karlsgodt



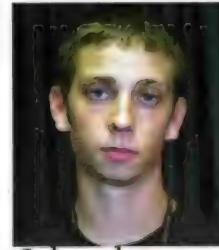
Joshua Kates



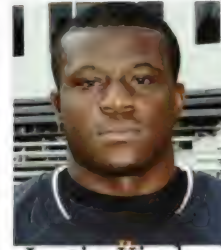
Gabrielle Kelly



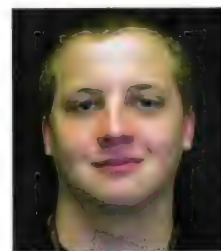
Rachelle Kelly



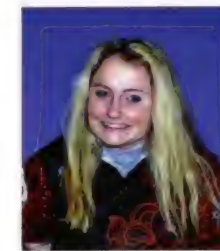
Johnathon
Kent



Justin Kindred



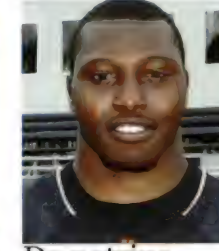
Austin King



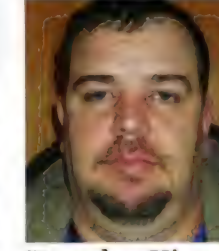
Christy King



Alexander
King



Demetrius
King



Douglas King



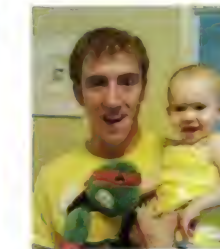
Justin King



Rebecca King



Wayne King



Eric Kinman



Robin Kinman



Tia Kline

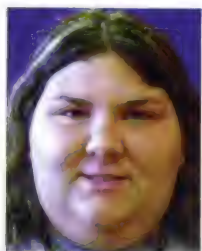


Noah
Knochelmann

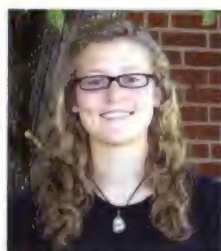


Lithium burns white but gives flames a crimson-red hue. The transmutation of lithium atoms into helium in 1932 was the first fully man-made nuclear reaction (67).

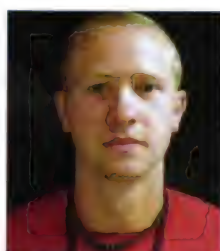
Undergraduates



Katelynn
Knuckles



Cassy Kost



Travis
Kottenbrock



Jason
Lainhart

No
Photo
Available

Reed Lake



Wesley
Lamberson



Kayla Lambert



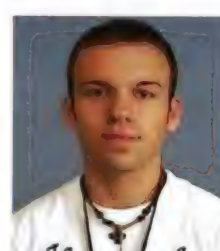
Robert Land



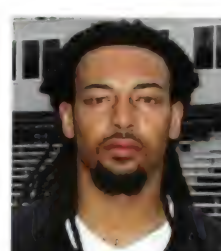
Liza Lane



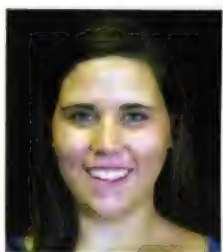
Kayla Langen



Norbert Laszlo



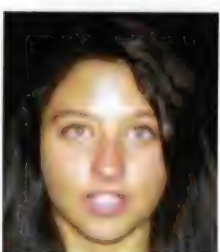
Edward
Lawrence



Amanda
Lawson



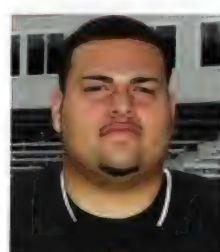
Colby Lawson



Kayla Lawson



Samuel
Lawson



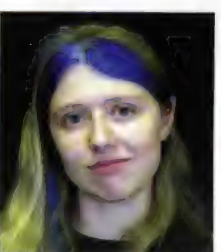
Alexis Lebron



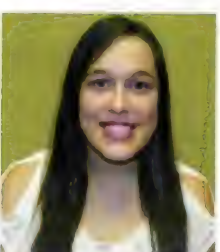
Tyler Ledford



Amanda Lee



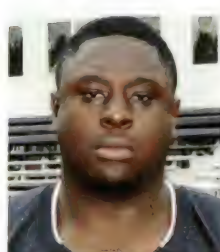
Candice Lewis



Amanda
Liford



Sarah Lingar



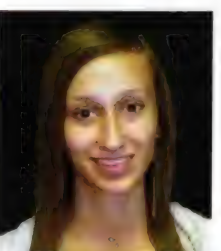
Michael
Livingston



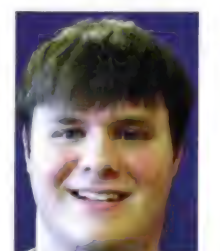
Hannah
Lockard



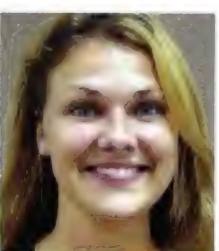
Jacob Lockard



Rayna Logan



Andrew Long



Misty Looper



Sirley Lopez



Edward
Malick



Isabella
Mando



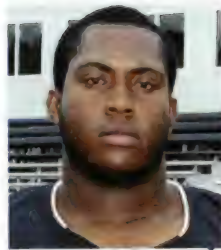
Andrew
Manning



Otis Manning



Summer
Manning



Lamar Manuel



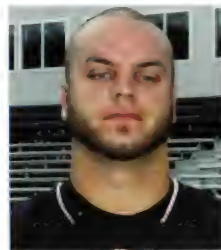
Dawson
Marcum



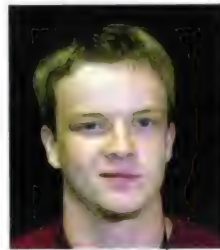
Michael
Market



Darby Martin



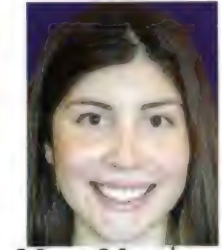
Trey Martin



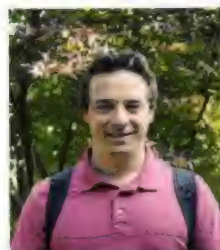
Ryan Martin



Tyler Martin



Mary Martinez



Richard
Mathes



Deshauntay
McClendon



Donavon
McClure



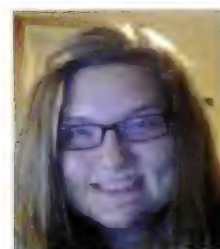
Aaron
McCollum

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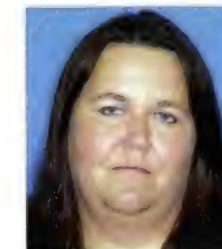
John McCoy



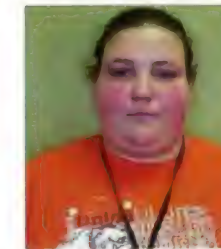
Joshua
McCoy



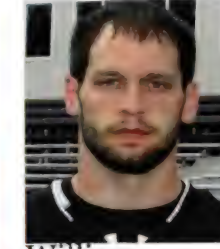
Tanya
McDonald



Stella
McFadden



Leigha
McFerron



William
McGarvey



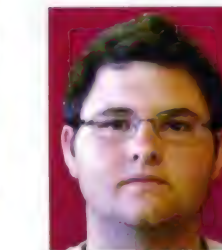
Raymond
McGlone



Byron
McIntosh



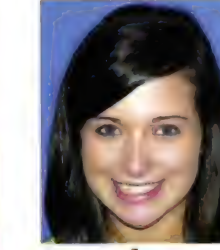
Lauren
McMillan



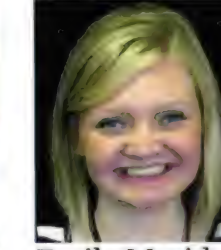
Richard Meier



Miguel
Mendez



Amanda
Merida



Emily Merida



Caitlin Merritt

Nitrogen is responsible for the orange-red, blue-green, blue-violet, and deep violet colors of the aurora (188).



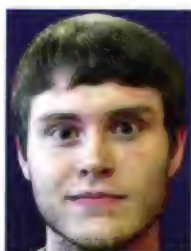
Undergraduates



Chad Messer



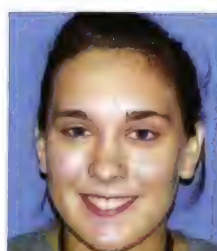
Nicholas
Mettert



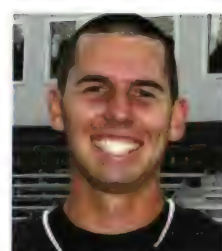
Steven
Middleton



Dakota Miller



Heather Miller



Jared Miller



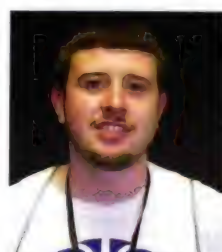
Joshua Miller

No
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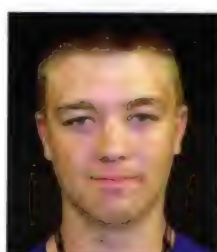
Kristen Miller



Marc Miller



Bradley Mills



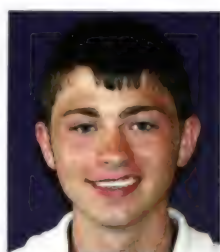
Dalton Mills



Derrick Mills



Dustin Mills



Jacob Mills

No
Photo
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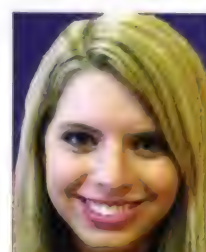
Jeffrey Mills



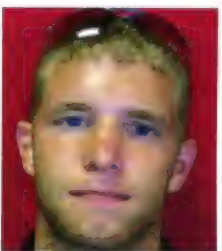
Lori Mills



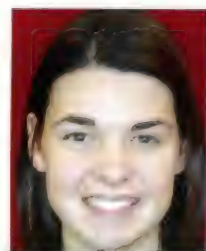
Melissa Mills



Sarah Mills



Brandon
Mitchell



Hannah Mize



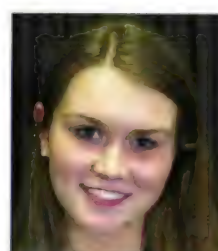
Sashoy
Moffatt



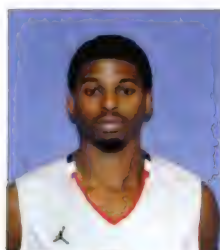
Michael
Moore



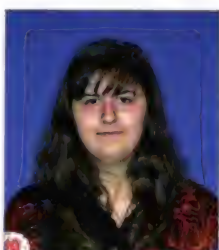
Paige Moore



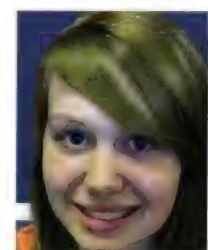
Kelsey Morgan



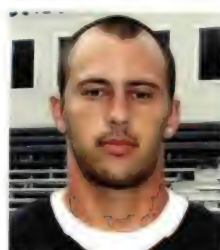
Shaquille
Morris



Meredith
Morrison



Erica Moses



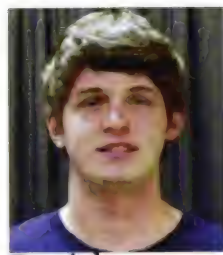
Ryan Moses



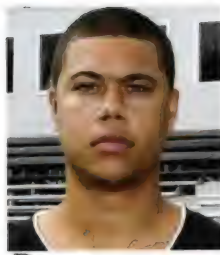
Dewayne
Moyers



Taylor Moyers



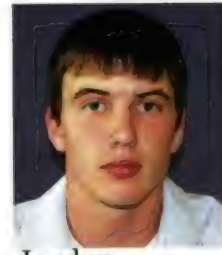
Daniel
Munkholm



Devyn
Murphree

No
Photo
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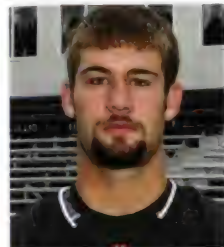
Jamie Muse



Jordan
Myneer



Lydia Nash



Austin Neely



Catherine
Neumann



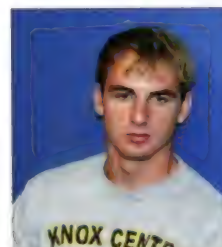
Kyle
Newhouse



Corey
Nicholson

No
Photo
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Eli Nickell



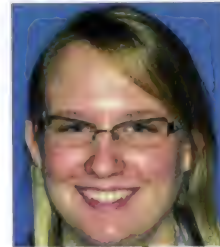
Corey Niebel



Joshua
Niemann



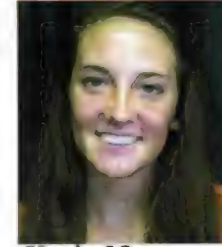
Joshua Nixon



Lydia Nolan



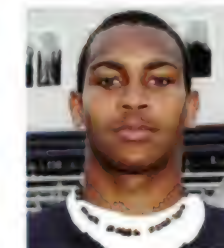
Victoria
Nottingham



Katie Nusz



Shelby O'Nan



Rayshaw
O'Neal



Vitoria
Oliveira



Joshua Oros

No
Photo
Available

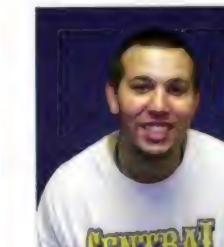
Erica Overbay



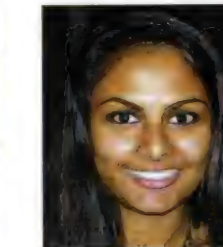
Charles Partin



Cody Partin



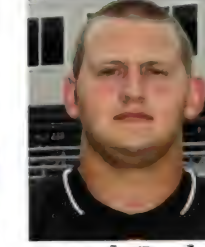
Travis Partin



Briana Patel



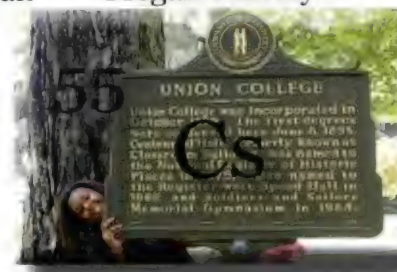
Kassondra
Patterson



Joseph Peak

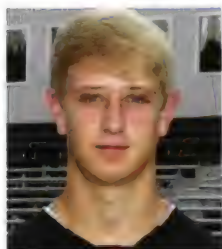
No
Photo
Available

Megan Peavley



Despite being normal metals in some ways, the alkalis (like Cesium), instead of rusting or corroding, can spontaneously combust in air or water. (17)

Undergraduates



Alexander
Peebles



Haley Perkins



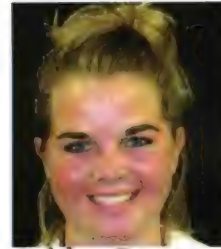
Jessica
Perkins



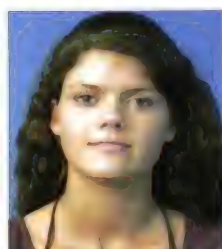
Katie Perkins



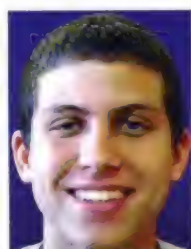
Laura Perkins



Ashley Perry



Tiffany Philpot



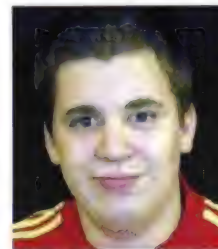
Daniel Phipps



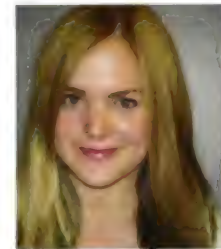
Derrick Phipps



Dayna Pickard



Cameron
Pieroni



Jessica Pike



Tiffany
Pilarski



Horatio
Pinnock



Michael Poff



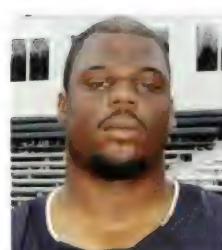
Susan Poff



Sara Poore



Brooke Porter



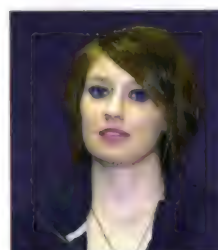
Deon Porter



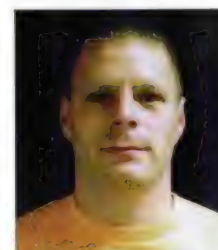
Erin Porter



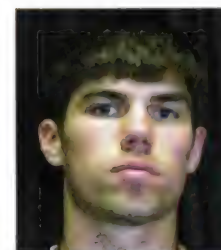
Corey Powell



Jamie Powers



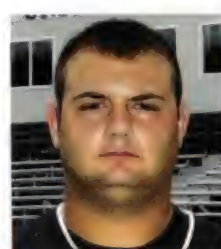
Aaron Price



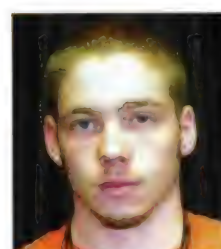
Nelson Price



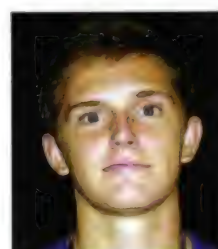
Chandler
Priest



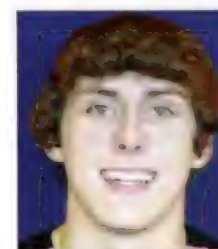
Tyler Ray
Priest



Taylor Pulliam



Andrew Raabe



Tyler Ralston



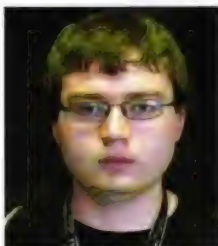
Jolena Ramey



Karina Ramos

No
Photo
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Tyler Ramsey



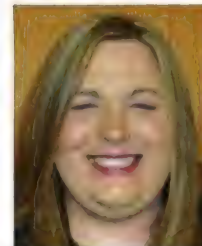
Logan Reams



Madison Reed



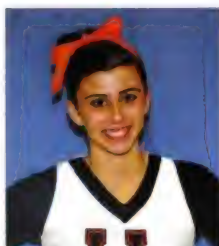
April Reeder



Whitney
Reynolds



Marah Rice



Emily
Richards



Ronald
Richardson



Jonathan
Riddle



James Rider



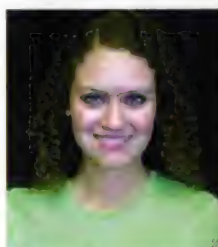
Sacorus Riley



Alyson
Roberts



Charles
Robinson



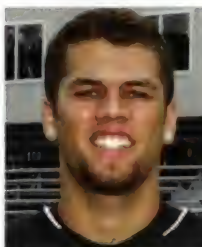
Mandi
Robinson



Yan Rocha



Cody
Rodriguez



Devon
Rodriguez



Steven
Rodriguez



Chelsea Root



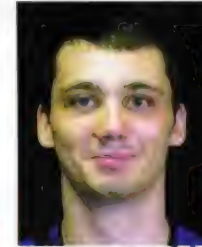
Marsee Ross



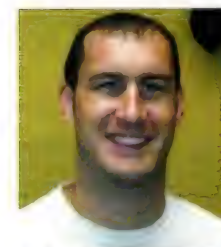
Tyler Ross



Vinicius Rossi



Steven Rudd



Mark Rupard



Marisa
Sammons



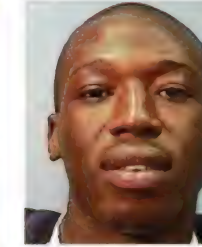
Hugo Sanchez

No
Photo
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Robert
Sanders



Carlos Sanford

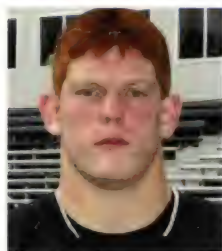


Sideek Sanogo

Bromine is rarer than about three-quarters of elements in the Earth's crust; however, the high solubility of bromide ion has caused its accumulation in the oceans, and commercially the element is easily extracted from brine pools, mostly in the United States, Israel and China (342).



Undergraduates



Cody Sapcut



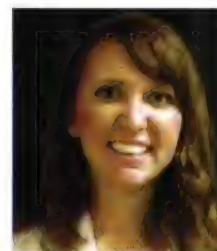
Thomas Sasser



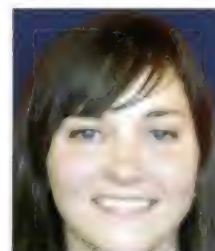
Samantha Sayre



Jacob Scalf



Leigha Scalf



Rachel Scalf



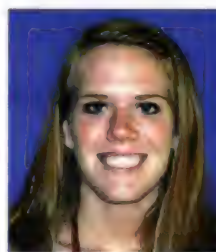
Danielle Scharr



Gianna Schauer



Dominic Scheele



Caitlin Scheidt



Jennifer Sckirl



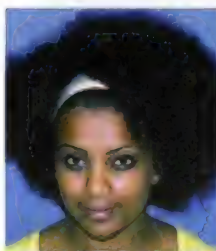
Thomas Scott



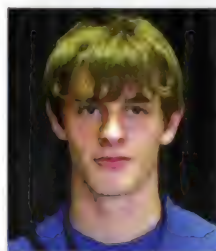
Sarah Scruggs



Dino Sefer



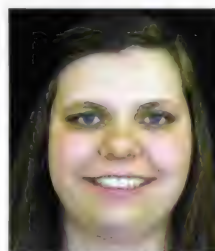
Rebekah Seifu



Austin Seiter



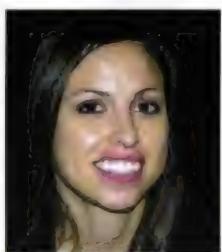
Frantzy Sejour



Heather Selby



Meghan Selvy



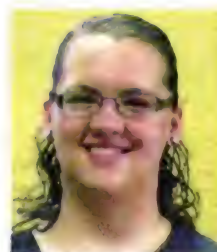
Chasity Shackleford



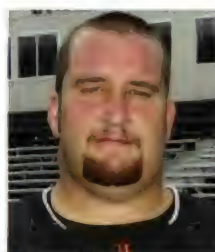
William Sharkey



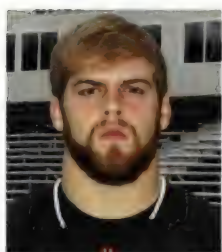
Isaac Shaull



Ashley Shepherd



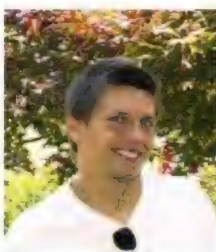
Jonathan Shipley



Ryan Shipley

No
Photo
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Kristin Shupe



Carter Sibley



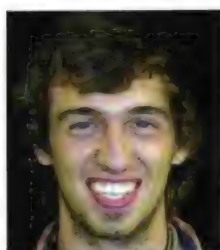
Howard Sigmon



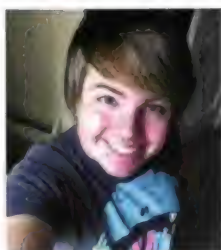
David Simpson



Kayla Simpson



Stephen
Simpson



Austin
Sizemore



Lauren
Slusher



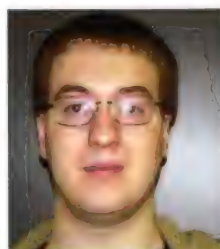
Ashley Smith



Austin Smith



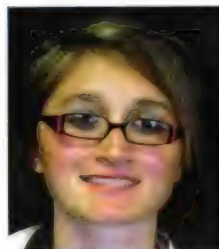
Bri-yanna
Smith



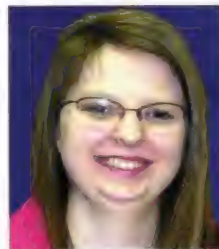
Carl Smith



Charles Smith



Christy Smith



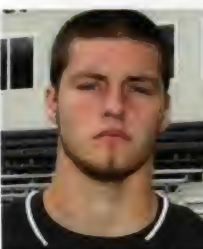
Debra Smith



Edwin Smith



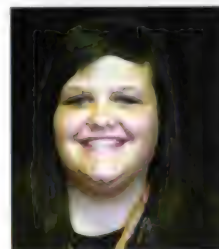
Frederick
Smith



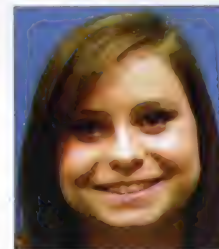
Jared Smith



Joshua Smith



Kara Smith



Kirsten Smith



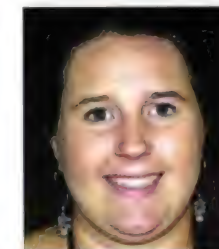
Raychel Smith



Raymond
Smith



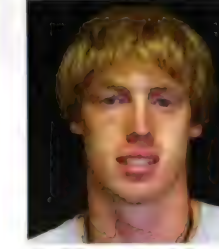
Summer
Smith



Sydney Smith



Tarik Smith



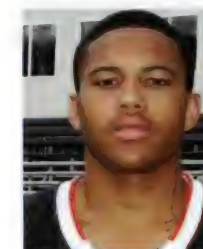
Jeffrey Snider



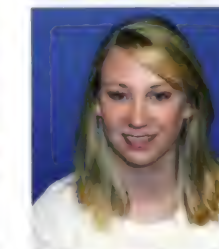
Donovan
Spann



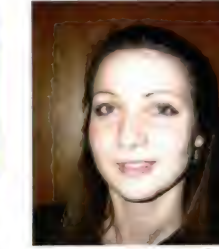
Timothy
Speckman Jr



Veashawn
Springs



Courtney
Sprinkles



Celena Sproles



Caleb
Spurlock

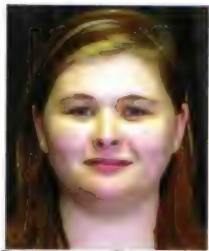


Jacob
Spurlock

As a liquid and solid, oxygen is pale blue (310).



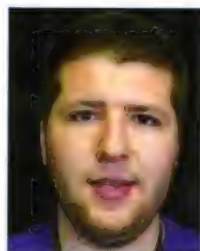
Undergraduates



Lauren Stage



Houston
Stagner



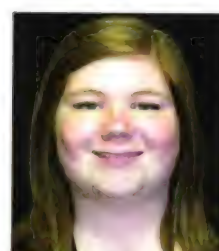
Justin Steele



Joshua
Stephens



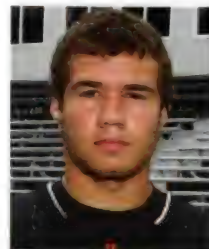
Hope Stewart



Tasha Stewart



Renardo
Stokes



John Stout



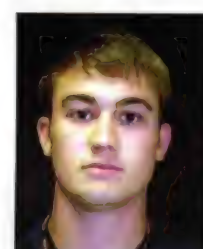
Travis
Strachan



JD Strange



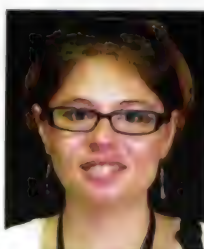
Kayleigh
Straup



Benjamin
Stuber



Vance Sullivan



Faith Sweeney



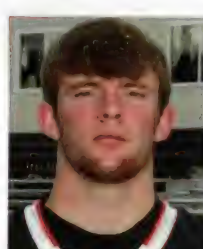
Amber Taylor



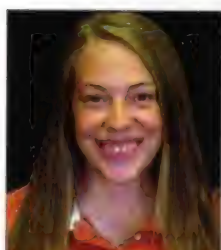
Eric Taylor



James Taylor



Jordan Taylor



Kendra Taylor



Coy Taylor



Toni Terrell



Courtney
Thomas



Darius
Thomas



James Thomas



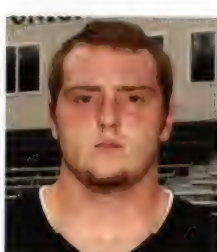
Jennifer
Thomas



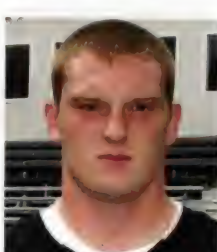
Matthew
Thomas



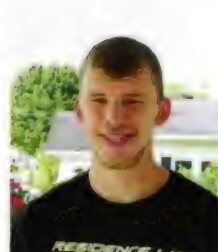
Roderick
Thomas Jr.



Nicholas
Thomason



Steven
Thomason



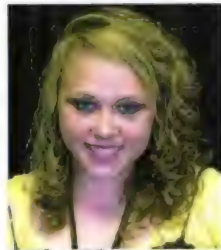
Cody
Thompson

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Photo
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Lexus
Thompson



Derry Thorpe



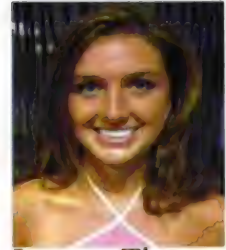
Hila Tigue



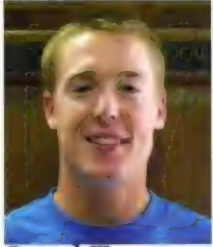
Noel Tiller



Virginia
Tillery



Lauren Tipton



Jared Tomany



Daniel Trauth



James Tripp



Tara Tucker



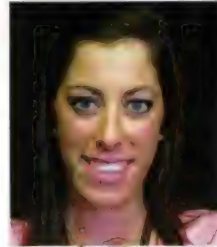
Brittany
Turner



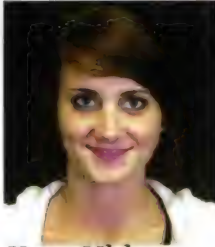
Krista Tuta



Callum
Tychowski



Cassie Tye



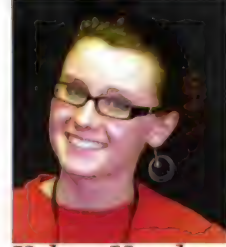
Kara Uhl



Trust Upson



Trey Upton



Kelsey Vandy



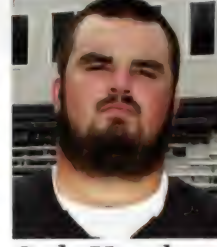
Charles
Vanover



Jennifer
Vanover



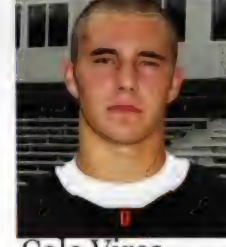
Nicholas
Varner



Cody Vaughn



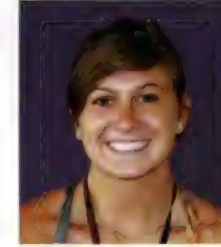
Keith Venis



Cole Vires



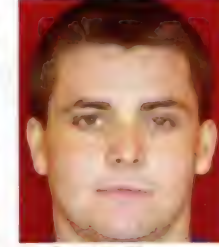
Kelley Wagner



Lisa Wagner



Micheal
Wagner



Zak Walker

Phosphorus is the second most common mineral in the body.
It's the structural component of all cells (148).



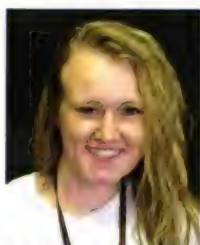
Undergraduates



Edward Walsh



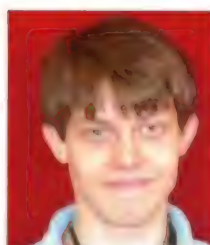
Payten
Walters



Taylor Ward



Autumn
Warren



Samson
Warren



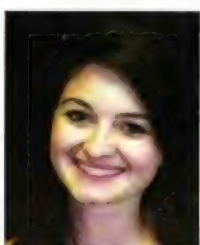
Lindsey
Waters



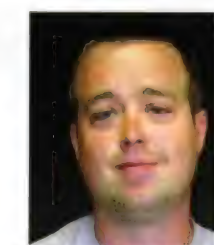
Margaret
Watkins



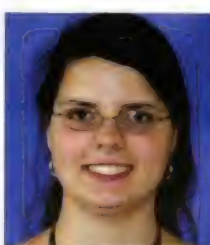
Jonathan
Watson



Elisabeth
Weaver



Adam Webb



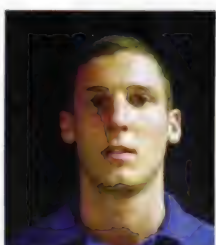
Krystal Webb



Helen Weber



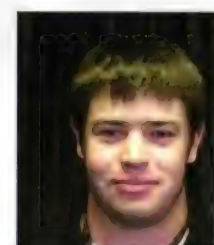
Heather
Welch



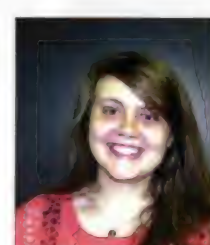
Matthew
Welch



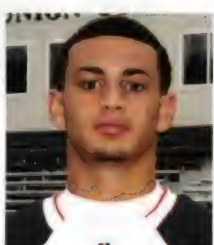
Alton West



Tyler Wheeler



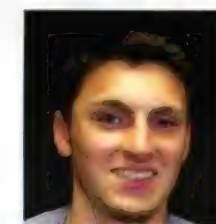
Audrey White



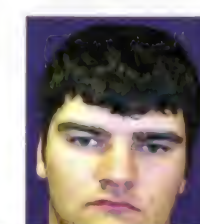
Trey White



Jake White



John White



William White



Zebulen
White



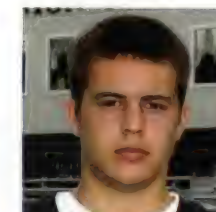
Dalton
Whitney



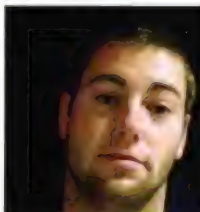
Lon
Whitson



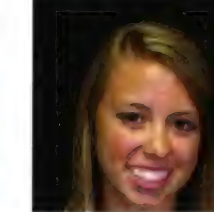
Kayla
Wilburn



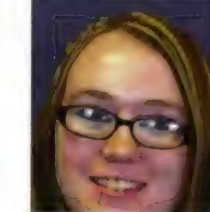
Colin Wilkins



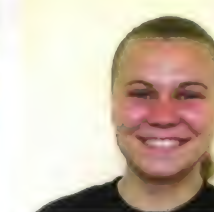
Kyle Williams



Leigh-Ella
Williams



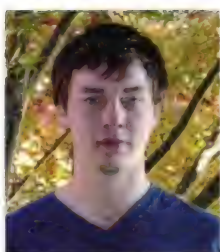
Stephanie
Williams



Kari
Williamson

No
Photo
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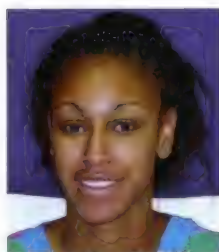
Kevin
Williamson



Dylan Willis



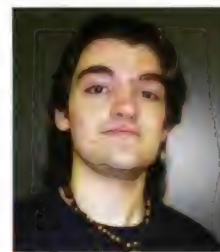
Tiffany Willis



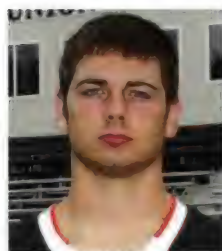
Martika Wills



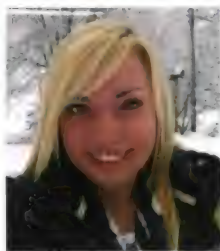
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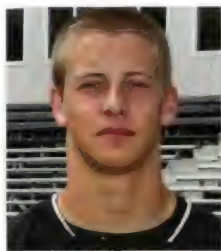
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Cory Wilson



Holly Wilson



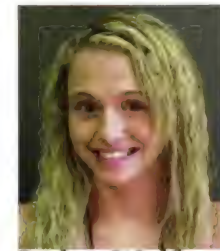
Levi Wilson



Taylor Wilson



Ashley
Wojnowski



Jaclyn Wolfe



Joseph
Woodley



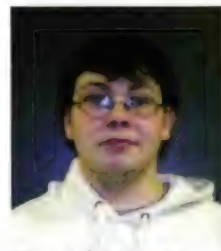
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Aaron Wright



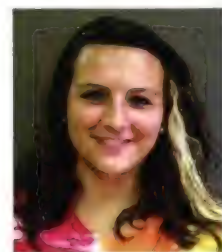
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David Wyatt



Xavier Wyche



Madison
Wyngaert



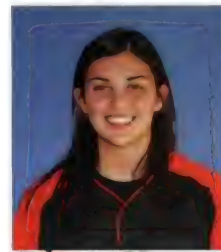
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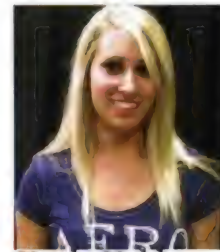
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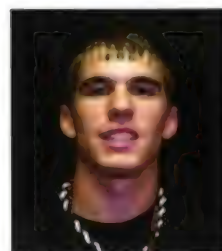
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Johnna Yeager



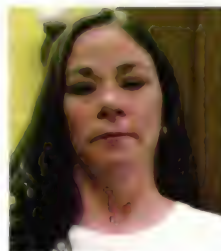
Kayla Yokley



Tyler Young



Glenna
Young



Katherine
Young



Ryan Young



Brittany Zins

Californium is estimated to cost around 2.7 billion dollars per 100 grams.



Faculty & Staff



Fidelis
Achenjang



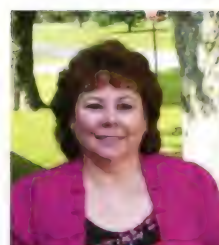
Dustin Adams



Ken Alford



Zach Allen



Paula Allen



Casey Armour



Robert
Armour



Jesse Barton



David Benders



Jessica
Bergman



Rebecca
Bishop

No
Photo
Available

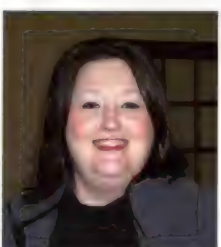
Kathy Blaydes
- Walczak



Quetha Boles



Randy Botkin



Brisja Brewer



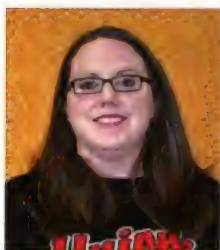
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Kevin Burton



Clay Butler



Andra Butler



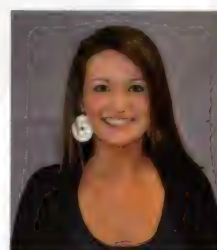
Jodi Carroll



Robert
Chandler



Sheila
Chapman



Maghann
Chestnut



Carol Clouse



Monica Clouse



Heather Cole



Shayne Confer



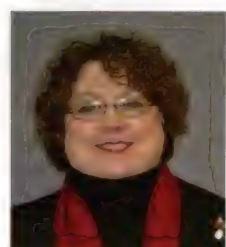
Jessica Cook



Jon Cooley



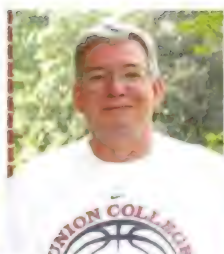
Erin Cooper



Tara Cooper



Bruce Cory



Dan Covington



Jim Cox



Dee Crescitelli



Kathleen
Crossen



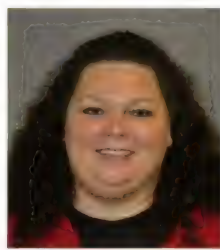
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Crowley



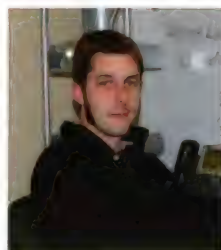
Tim Curry



Adam Dailey



Billie Daniels



Nolan
Davidson



Linda De
Morales



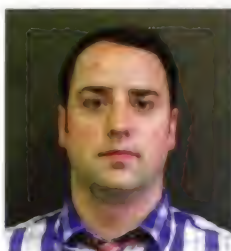
Ashley Doolin



Bobbie Doolin



Kay
Eads-King



Brandon
Edwards



Katie Egging



Matt Egging



Martha Ellison



Jamie Engel



Miles Estes



Eric Evans



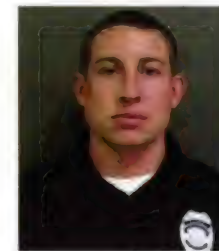
Brock Evans



Lana Faulkner



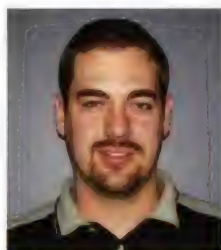
Deloria
Faulkner



Chad Ford



Rafael Forti



Jason Frazier



Hugo Freund



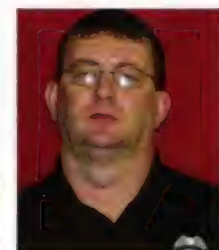
Daniel Furturo



Virginia Gay
Gandy



Thomas
Garland



William
Garland

One of the radioactive isotopes of krypton, can be combined with phosphorus to produce materials that glow or shine in the dark.



Faculty-Staff



James Garrett



Melissa
Garrett



John Gatto



Jeff Goodman



John Gould



John Gray



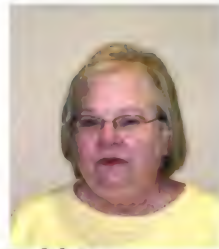
Mike Gray



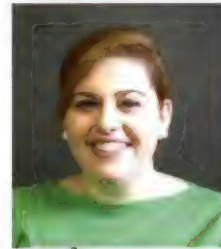
Peter Haile



Robin
Hamilton



Bobbie
Hamilton



Sarah
Hammond



Kevin
Harrington



Jennifer
Hatfield



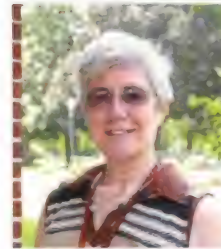
Marcia
Hawkins



Billie Hayes



Sarah Hendrix



Ella Hensley



Jared Hirtz



Ashley Hobbs



Denise Hoover



Bill Hopper



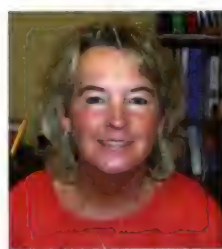
Steve Hoskins



Preshus
Howard



Larry Inkster



Kathy Inster



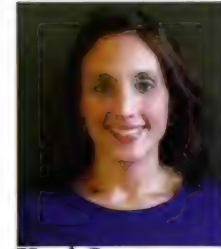
Susan Isaacs



Jerry Jackson



Summer
Jackson



Kari Jamerson



James
Jamerson



Anisa James



Amy Jenkins



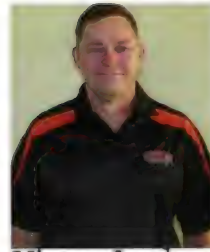
Jennifer Jones



Charles Jones



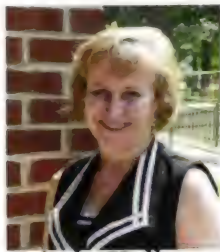
John Jones



Victor Jordan



Sean Jump



Frieda Kalb



Marco Knorr



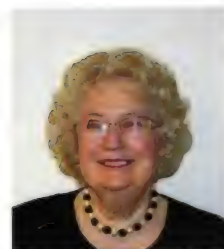
Michelle Kwon



Margie
Langley



Myrlyn
Lawson



Mary Alice Lay



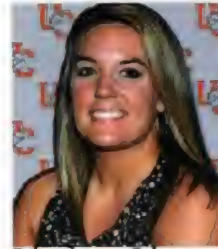
Kyung Hoon
Lee



Sam Lee



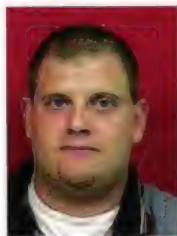
Denny Liford



Lindsay Ligon



Justin Lilly



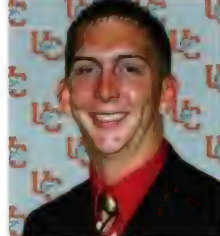
Andre Linn



Jeffrey Logan



Dal Macon



Matt Mahony



Christina
Marion



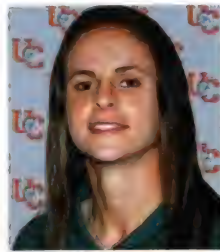
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Marley-
Frederick



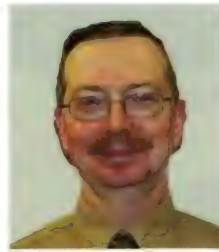
Tom
McFarland



Mac McRight



Camila
Mendes



Don Merriam



Andy Messer



Jay Miller

"Iridium is a siderophile, or iron-loving, element, and as a result most of it is tied up in the earth's molten iron core. The only common source of iridium is iron-rich meteors, asteroids, and comets." (75-76).



Faculty-Staff



David Miller



Diana Mills



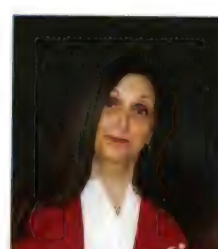
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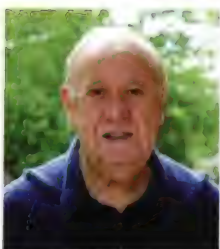
Bruce Miracle



Diane
Montgomery



Yvonne Moore



Don
Musselman



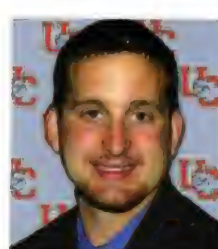
Jamie Ness



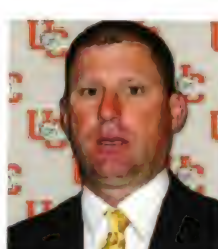
Sandra Nickell



Jordan Noble



Dan Nowak



Bart Osborne



Paula Parker-
Grubb



Carolyn Payne



Dealeana
Phillips



Mona Powell



Whitney
Powell



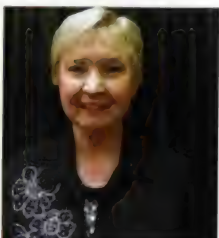
Adam
Prokopchak



Lorene
Putnam



Manikya
Rajakaruna



Joy Ramsey



Michael
Ramsey



Marshall
Rasnake



Jason Reeves



Tommy Reid



Melissa Reid



Melinda Rice



Cheryl
Robbins



Debbie Ross



Jim Rubin



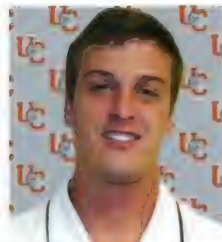
Tommy Ruth



Faiz Salehi



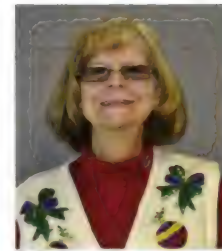
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Bryce Seals



Austin Sebald



Margaret
Senters



Regina
Shackelford



Linda Silber



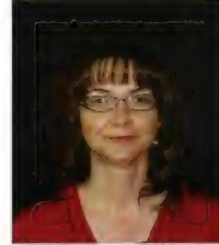
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Simpson



Russ Sisson



Tim Sizemore



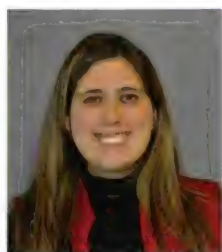
Lynn Smith



Pam Smith



Jimmy Smith



Natalie Smith



Stephanie
Smith



Londa
Sowders



Mary Beth
Spurlock



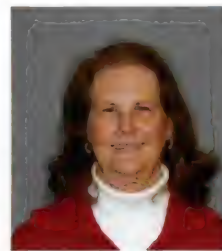
Jay Stancil



Ashton Strode



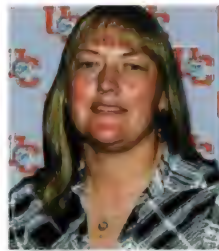
John Taylor



Barbara
Teague



Megan Tillery



Amanda
Vance



Ilie Vasilescue



Walter
Wahlstedt



Denise
Wainscott



Karl
Wallhausser



Sarah Wilder



Lucious
Willson



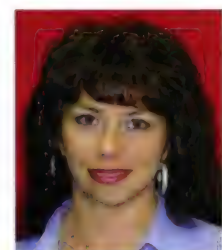
Gina Wilt



Andelys Wood



Ann Worley



Lisa Wyatt



Eric Wyrick



Kristan Yates



Marsha Yost

ELEMENT 2: Clubs & Events

2 Club

Tight bonds among the protons, neutrons, and electrons. Long standing and stable. Dependant connection with like elements.

1 H Hydrogen 1.0079								
3 Li Lithium 6.941	4 Be Beryllium 9.0122							
11 Na Sodium 22.9897	12 Mg Magnesium 24.305							
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.9559	22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.9332
37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.9059	40 Zr Zirconium 91.224	41 Nb Niobium 92.9064	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.9055
55 Cs Cesium 132.9055	56 Ba Barium 137.327	57 La Lanthanum 138.9055	72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217
87 Fr Francium (223)	88 Ra Radium (226)	89 Ac Actinium 227.03	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (277)	109 Mt Meitnerium (268)

58 Ce Cerium 140.116	59 Pr Praseodymium 140.9077	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25
90 Th Thorium 232.0381	91 Pa Protactinium 231.0359	92 U Uranium 238.0289	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)

						2 He Helium 4.0026
						10 Ne Neon 20.1797
						18 Ar Argon 39.948
						36 Kr Krypton 83.798
						54 Xe Xenon 131.293
						86 Rn Radon (222)
5 B Boron 10.881	6 C Carbon 12.0107	7 N Nitrogen 14.0067	8 O Oxygen 15.9994	9 F Fluorine 18.9984		
13 Al Aluminum 26.9815	14 Si Silicon 28.0855	15 P Phosphorus 30.9738	16 S Sulfur 32.065	17 Cl Chlorine 35.453		
28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.409	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.9216	34 Se Selenium 78.96
46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6
78 Pt Platinum 195.078	79 Au Gold 196.9665	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.9804	84 Po Polonium (209)
110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (277)				

65 Tb Terbium 158.9253	66 Dy Dysprosium 162.5	67 Ho Holmium 164.9303	68 Er Erbium 167.259	69 Tm Thulium 168.9342	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967
97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

Social Players

The Social Players Guild may be a young club, but that didn't stop brothers Caleb and Jacob Spurlock from making the past year one to remember. They offered several exciting activities, from movie nights featuring Beetlejuice and Spirited away to UNO tournaments; there was always fun to be had at their meetings. One of the most memorable events was Jumbo Monopoly, a life-size version of the famous Hasbro game. The game featured standard U.S. dollar-size money, a board that was 10 feet by 10 feet, and used actual irons, whistles and boots as tokens. "We received help from several people" explained Caleb, one of the organizers of the event, "Jared Hirtz gave us several materials and encouragement. Matt Egging at the library provided critiquing help and Professor Andy Messer volunteered to narrate our Monopoly night, donning his knowledge of early 1900's business profession and an accurate New Jersey accent." But the main event of the year was yet to come.

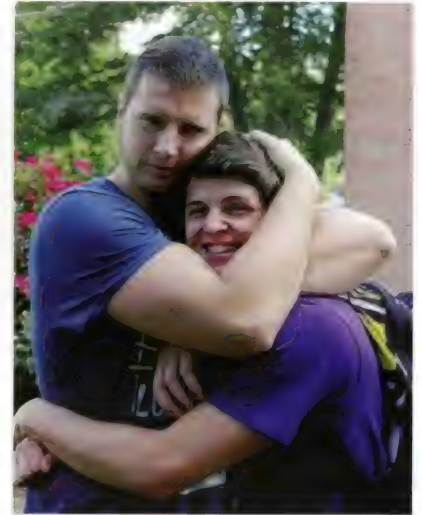


Last spring, the dynamic duo took it upon themselves to organize a trip to the Harveysburg Renaissance festival in Ohio. Set in 16th century under the reign of Elizabeth I, the fairgrounds cover around 30 acres and gave students the opportunity to see such wonders as jousting, blacksmith's at work, two-pound turkey legs and something involving Jared Hirtz and a dirty wench. "I had been to renaissance festivals before in Arizona, but it was nothing compared to the one in Ohio" remarked Robin Ferrell, "it was like a big city!" From the very beginning they faced obstacles such as canceled SGA meetings, schedule conflicts, and presidential re-elections. But these faithful gamers persisted and pulled through. The trip was an overwhelming success. The Spurlock brothers say they will try to make this a yearly event, giving more students the opportunity to share in the experience.

International Club

For a small school, Union is a melting pot of nationalities. The campus body represents 15 different countries. President Krista Tuta has faced some challenges in her goal of providing another place to call home on campus for these students.

Between other activities on campus and the majority of the members being student athletes, Krista has a hard time bringing the students together. She has faced these problems head on though, scheduling events and meetings on Sundays to avoid conflict with other happenings on campus.



The highlight of the year for the club is International Week. Through the week, the club aims to educate their fellow students on the different cultures through food, dancing, music, and presentations. "A lot of students don't realize how different other cultures are. We want them to see and experience things that don't happen in Barbourville", Krista explained, "Don fixes international themed dinners, we host presentations, and sometimes there is tradition dances! But our ultimate goal is still to make the people far away from home feel at home."

Titanium hypnotizes blood cells: it triggers zero immune response and even cons the body's osteoblasts (190).



Student Support Services



Helping students thrive personally and academically, the Student Support Services program at Union College is part of the Trio program. It offers a wide variety of services to low income, disabled, and first generation students. Personal, career and academic counseling and tutoring and career placement are all available at no cost to eligible students. The Trio program emerged out of the Economic Activities Act of 1964 in response to the war on poverty. SSS began nationally in 1968 but did not reach Union College until the 1980s.

The ultimate goal of the program is to increase college retention and graduation rates. Extra financial aid is offered to eligible students. SSS also provides the curriculum for the Freshmen Seminar class. It's there they learn from a peer mentor and faculty members how to succeed in college.

Sophomore SSS student Kayse Cornett believes the program was a big part of her success as a freshman last year. She said, "It personally gave me help in keeping my grades up. Each student in the program had to sign a contract and at midterms and if you had anything below a C in any of your classes you had to take part in the SI sessions for that class so you could bring up your grades."

The Student Support Services program also takes their students on several trips throughout the school year. On this Cornett said "The trips encouraged me to stay in the program and go to the meetings so it was possible for me to attend the trip. I loved the one we took last spring. We visited a college in Florida and I got to see the beach for the first time. It was a great experience for me."





SSS coordinator Deleana Phillips stated, "The purpose of the trips we take is to expose first-generation and low-income college students to cultural and educational events they may not have had access to otherwise. We take several Graduate School tours to expose students to degrees in higher education and how to apply for admissions. By giving students a chance to check out different graduate schools, they can decide what programs are right for them and what schools they may want to attend."

The cultural trips we take provide students with an opportunity to see things and do things they otherwise would not be able to do."

Cornett continued to thrive throughout her freshman year at Union as she made new friends to support her on her journey to higher education. SSS not only provided the tools she needed to achieve good grades but also introduced her to a new group of companions.



"I talked to people I would have never have imagined talking to before and I have a lot more friends now other than just my soccer teammates," said Cornett.

Looking back on her freshman year at Union, Cornett realizes how much the program really helped her, "I really don't think I would have done as well my first year here without the SSS program, with their help I was able to achieve more than I thought I would."

by: Jessica Frisby



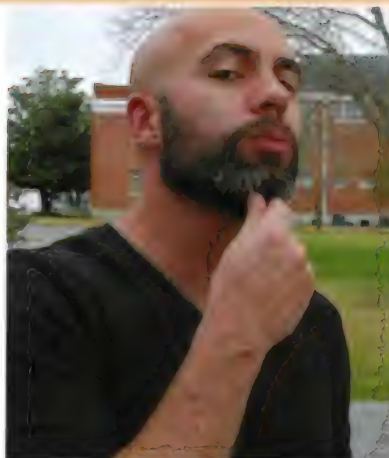
Element thirty three has had quite a reputation since ancient time when Roman assassins used to smear it on figs (47).



Common Partners

The students of the Common Partners program would argue there are a variety of components making up the program and the people who commit to service, but a few of the components consist of expectation, exploration, experience, example, and expertise.

The five E's are the five steps every student in the program must learn and at the end of their journey at Union, they should have mastered each E. The previous director of Common Partners, Gabrielle Mellendorf explained their importance, "Throughout a student's career, they develop by what they use. The model is perfect for not only teaching service but helping students to learn about service: they start with the expectations of our group and when they graduate they become experts of servant-hood."



Expectation = freshman. As a new student, they are expected to meet a certain caliber of our program. They should start to realize the program is not only a scholarship opportunity, but a service opportunity. Heather Selby, a freshman, talked about her expectations. "When I came for Common Partner's orientation, I didn't really know what to expect; I thought I would just be doing service here and there but I realized quickly the people in the group are serious about service and what they can do to help and when they taught us about the five E's, it hit me that they want us to do our very best in service and school; that we are student leader's on campus and should uphold that. As for my expectations for the program, I hope to meet new people through service and the program. I'm excited to see what the year will bring!"



Exploration = sophomores. By their second year of college, they should not only begin to explore more service opportunities but also themselves. Their previous service should have given them insight to a deeper meaning of service and changed their outlook. Christina Brandenburg, a sophomore and Crafts on Wheels intern stated, "Exploration is getting out of your comfort zone and trying new service and this was part of the expectation I had coming in. Personally, my exploration has been through the friends I have made in the program and adapting to the diversity within the group. Exploring is meeting new people and putting yourself out there to learn new things and Common Partners definitely encourages you to do that."





Experience = juniors. By a student's third year in the program, they should have gained many service opportunities to give them a unique college experience. At this time, they should be able to talk of their experiences and gain experience by continuing to participate in service. Jessie Green, our junior intern stated, "I definitely feel like Common Partners has let me experience a lot of things in diverse situations, like Repair Affair, Alternative Spring Break, and working with other groups on campus. As the Junior Intern I get to share my experiences with the sophomores and freshman to help them out with their service as well, which is one of the reasons I love being in Common Partners."



Ytterbium is named for Ytterby meaning: outer village," a coastal village in Sweden. Ytterby quarry supplied fine raw ore for porcelain (60).



Example = seniors. By their senior year they should set an example to the other Common Partners and let their experience from service and life inspire others to want to change their lives and the lives of others. As a sophomore and Community Advocacy intern, Rebekah Griffith had to step up and take on more responsibility by helping the freshman and planning events, but really had to look for help from some of the seniors to guide her in the right direction. "Carla Jackson, a fifth year senior who is still in program, has helped me tremendously this semester with the Kick-It event; She let me know the people I needed to contact and helped me organize the games." Carla stated how she felt as an example, "I feel like I make a difference in the world with the help of Common Partner's and this is an example to the other students to want to make changes as well."

Expertise = graduating seniors. This one is for the seniors graduating and Common Partner's alumni. By the end of their journey in the program, they should be an expert in the program. They should be able to tell about their expectations, personal exploration, experience, and the example they lead for others. Service should be their expertise. Austin Sebal, the current Common Partners director, stated, "After four years of being in the program, I feel like the journey I've experienced has taught me to be an expert in service and community involvement. I've learned by example and now I can be an example to the students and lead them to one day become an expert. The five E's really do help us learn how to be better servants to the community."

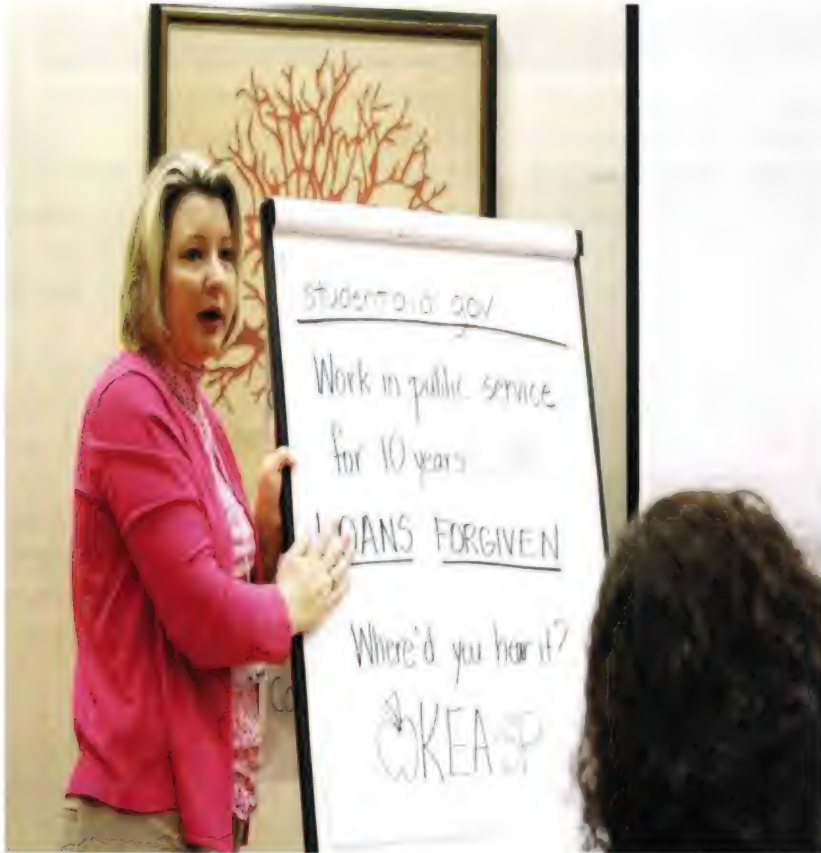
The five E's are critical to our program; they help the students find the true meaning of service, as Gabby stated, "Service is not just a visit to the soup kitchen; it is a sacrifice of that which is most dear to you. A sacrifice for a cause and it quickly becomes a passion." by Rebekah Marie Griffith



KEAS-CEC

Mission:

-Kentucky Education Association is the preeminent voice for quality public education.



Vision:

-We unite, organize, and empower members to advocate for themselves and to ensure a quality public education for every Kentucky student.

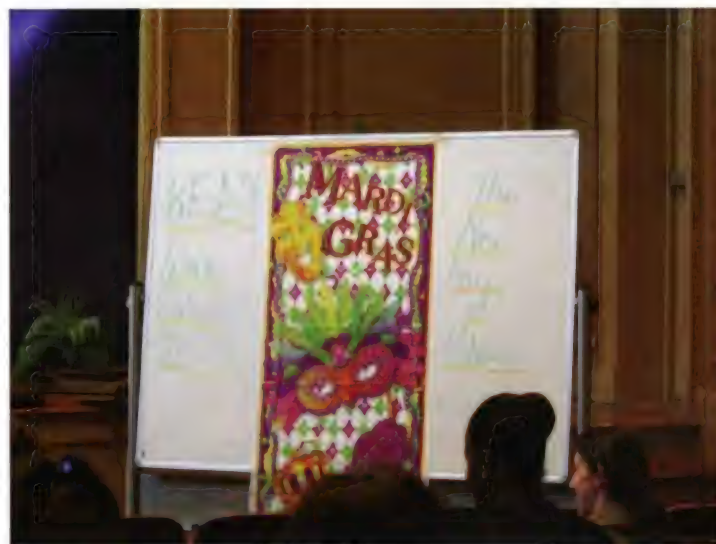
Values Statement KEA is committed to:

- Professionalism modeling expertise directed by sound judgment, empathy, and high standards
- Unity laying the foundation for a strong association through shared vision
- Advocacy using effective, meaningful communication and action to promote the interests of school employees and public education
- Respect consistently valuing individuals and their contributions
- Integrity demonstrating sincerity, trustworthiness and reliability
- Collective Action working together to achieve common goals





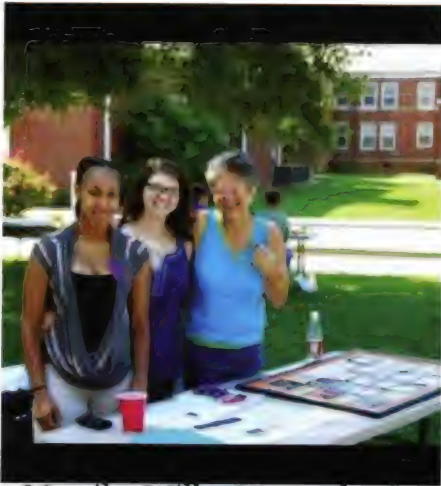
President: Jolena Ramey
 Vice-President/President-Elect: Stephanie Williams
 Recording Secretary: Morgan Baker
 Correspondence: Candace Asher
 Historian: Ashley Shepherd
 Treasurer: Melissa Mills



Astatine is the most scarce natural element. Scientists injected it into a guinea pig to study it. Astatine remains the only element whose discovery was confirmed by a nonprimate (333).



Sociology club



Martika Wills, Samantha Sayre, and Dr. Silber



Samantha Sayre



Sam Sayre, Dr. Silber, Helen Weber, and Krista Tuta.

Like all of Union's clubs and organizations the sociology club has impacted this campus in a unique way. Senior co-president Samantha Sayre describes it best, "Sociology Club is a place for Sociology majors and anyone interested in what sociology is all about to come together and discuss social issues and look deeper into them. For example, one of our programs this semester was "What's Love Got To Do With It?: Hooking Up in College". We talk about the things other clubs and people are

afraid to, that's what Sociology is all about, going where others dare not to."

Club leaders, Dr. Silber and co-presidents Samantha Sayre and Martika Wills, encourage students of all majors and backgrounds to join the sociology club and participate in its events. Samantha explains why all students would enjoy to be a part of the club, "I think other students should get involved in sociology Club because sociology is part of everyone's everyday life, it's in everything we do. We're also pretty

fun and love to go eat or do potlucks for our meetings and discussions; everyone loves good food and good company and we're no different. I hope the club only gets bigger and stronger after I graduate in May, its been a huge factor in my development as a student and person for the past four years and Dr. Silber has become a second mother to me."

From their programs for students to their friendly and caring leaders, the sociology club has been helping to shape and steer students in the right direction for years.

Social Work Club



Psychology clubs



The Psychology Club is an open organization for students where they can learn about the mind, human behavior, or psychology as a whole. "The club is open to anyone with an interest; you don't have to be a Psychology major," says Dr. Charles Jones, Associate Professor of Psychology/Department Chair. "In fact, we have a lot of students that are business majors, sports majors, education majors or even forensic majors who really want to better learn how to deal with people. We have actually had students switch to a Psychology major because of how well they enjoyed the club." Dr. Jones is also a former sponsor of the club. The club takes many trips. Some of these trips are simply to museums to study and learn, but some are to mental health facilities to do observations.



The club also partakes in movie nights where they will watch documentaries or even sometimes a recreation horror movie of something that actually happened and analyze the murderers' psychological state.

The "Psychology club" participates in the Psych Bow. "Psych Bowl" is a competition hosted by the Kentucky Psychological Association for undergraduate psychology majors throughout the state. Union has competed in this event for more than 10 years.

Through the Psychology Club you can also become a member of Psi Chi which is a national organization hosting competitions where students from different compete.



Dr. Jones tells me, "then schools will answer questions and debate against one another. "The Psychology Club was started roughly in 2002." we got Psi Chi shortly after in 2004." Psi Chi was actually started at Yale University in 1929.

Senior Sarah Scruggs was one of the students inducted into the honor society. Sarah said, "The induction ceremony was nice. I was inducted as vice president of Phi-Alpha and had to talk with the president in front of all the guests. After the ceremony, we also inducted some honorary members into the club. It was a very memorable experience."

The Psychology Club truly has something that it can offer for almost every student on campus. It can really help hone and sharpen your people skills, giving you the edge you need to make the next steps in your life.



It's not clear why manganese, of all the dissolved metals in the ocean, galvanizes shark teeth, but scientists know roughly how quickly it accumulates: between one-half and one and a half millimeters per millenium. From that rate scientists have determined the vast majority of recovered Megalodon (giant ancient shark) teeth date from at least 1.5 million years ago, meaning Megalodons probably died out around then (261).



“Doubt”



With a small cast of only four actors, Alexandra Estes was the perfect role model and leader, paving the way to an undoubtedly brilliant performance. Playing a character many years older than herself, memorizing lines for a character who is in almost every scene and throwing a new Theatre director in the mix doesn't sound like fun to many people, but for Estes, it was a challenge she would not back away from.

The fall of 2012 brought many changes to the Union College Theatre. The play titled “Doubt” focused on many internal struggles and doubts within each character, but in the script is not the only place that doubt arose.

Dr. Diane Montgomery's first year as the Union College Theatre director had many people not knowing what to expect. Taking after Dr. Pettys, better known as Mama P, the former Theatre director and teacher for the past 28 years, was without a doubt big shoes to fill. Estes stated, “Working with someone new is always a little unnerving. I worked with Mama P for a year and I knew how she worked, what she expected of me.

However, Dr. Montgomery quickly put my mind at ease from audition night on and I'm happy to have been directed by her and working as her Stage Manager now.”

Not only did adjusting to a new director spike Estes' nerves, so did the fact that her character was 30 to 40 years older than she is in real life. Estes stated, “Getting into a character who was much older than myself was a challenge. I wanted to be portray someone believable on-stage but also keep a part of myself.” Estes did just that. She was fearless and placed herself in her character's shoes in order to perform her role as Sister Aloysius. Estes explains, “I thought about people in my life who were older and thought of how they acted. Then I found things in my own life that I could relate to her life to help make it believable.”

Putting the rest of their doubts aside, the small cast learned to pull their emotions and create the

chemistry needed on stage. This being the first time this group of actors has worked together caused slight tension and animosity on stage but Estes says as soon as character was broken everyone was talking and laughing again and “that's what makes acting interesting.”

This play leads the characters to question their lifestyle choices and the day to day decisions they make and pushes the actors to question themselves and their roles as well. While doubt was a main them on and off stage the cast pulled together and created an experience that Estes will always remember. From all of this she realized the best part is, “There is a sense of family that you gain from spending time together constantly for weeks that no one else can understand. You share time and tears and laughs with these people and I know they may not, but I take a little piece if it with me as I go,” and undoubtedly everyone she has impacted will as well.

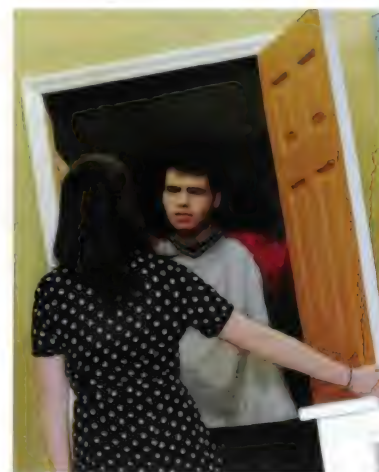
by Marah Rice



"Beau Jest"



Cast: (Left to right, backrow first)
Vanessa Grubb as Abe Goldman, Niel Jones as Chris Kringel, Terry Smith as Jo-Ann Goldman, Alex Smith as Sarah Goldman, Alex Estes (Stage Manager), Chessa Fernandez as Miriam Goldman, James Becknell as Bob Schroder, and Theater Director Dr. Diane Montgomery



This year the Union College Theatre performed the well known play "Beau Jest" in the Spring. It is a comedy about love and was made into a motion picture in 2008. It is about a young Jewish girl named Sarah, who hires an actor to play her fiance so her parents will stop trying to set her up with a suitable Jewish man for her to marry. Dr. Montgomery chose this as a contrast to the serious thriller "Doubt" which was the play in the fall. Beau Jest

was lighthearted and filled with good laughs.

The cast and crew were elated to perform a play of this stature in front of their peers and colleagues at Union College. Actor James Becknell states, "I had such a good time setting up and preparing for the show. I was more than ready to go out and give my friends and professors on campus a performance they would very much enjoy."

And indeed UC did, with a

full house the first night of the performance. Dr. Montgomery herself even states, "It was definitely a good show. I was very pleased to work with this group of young adults as well. They really loved working together and were overall highly dedicated individuals."



Einstein argued if atoms got cold enough--a billionth of a degree above absolute zero, the atoms would condense into a new state of matter. To test this, scientists blasted rubidium atoms with photons to slow down the rubidium atoms at which point they collapsed into the Bose-Einstein condensate, the coldest, gooeyest, and most fragile mass the universe has ever known (291-293).



Spiritual Life/Alternative Break

The Spiritual Life chapter on campus is dedicated to fellowship, prayer, study, strengthening faith, and encouraging spiritual growth. Besides having trips every semester and holding regular meetings with themes or ideas, they also have two lectures every academic year. While a small group, they are big on character and passion, which seems to grow every semester. They welcome all faiths, beliefs and ideas; and are open to any viewpoint or question.

Since joining the Union College family and restoring Spiritual Life to campus after it took a year off in 2004, Reverend David Miller created multiple groups, trips, events and brought in fresh ideas. The Spiritual Life internship was created in 2009. The Internship opportunity is about allowing anyone of any faith to join and be part of this powerful group of people. Everyone interested in joining this program or group is welcome.

"This opportunity to attend these events has given me friends I probably would have never met," stated Robin Garrison. "They really felt welcoming to someone who had never attended anything before." She also added, "They were a blast to be with, even with twelve of us squeezed into a hot tub." Robin had a great time learning to meditate and great fun sharing through ice breakers, including the chicken dance-a-thon.

Audrey Earls said, "It is an incredible mix of people." During a spring retreat, we zip-lined, and without realizing it I had turned backwards...the rope was attached to a tree. Luckily, I didn't hit it and even more luckily no one was recording my decent towards the tree." She also stated that through this group it gives you a new dimension on people and thoughts they have. This program isn't simply about fun, to be an intern you have to be committed to everything and willing to do what it takes to accomplish goals."

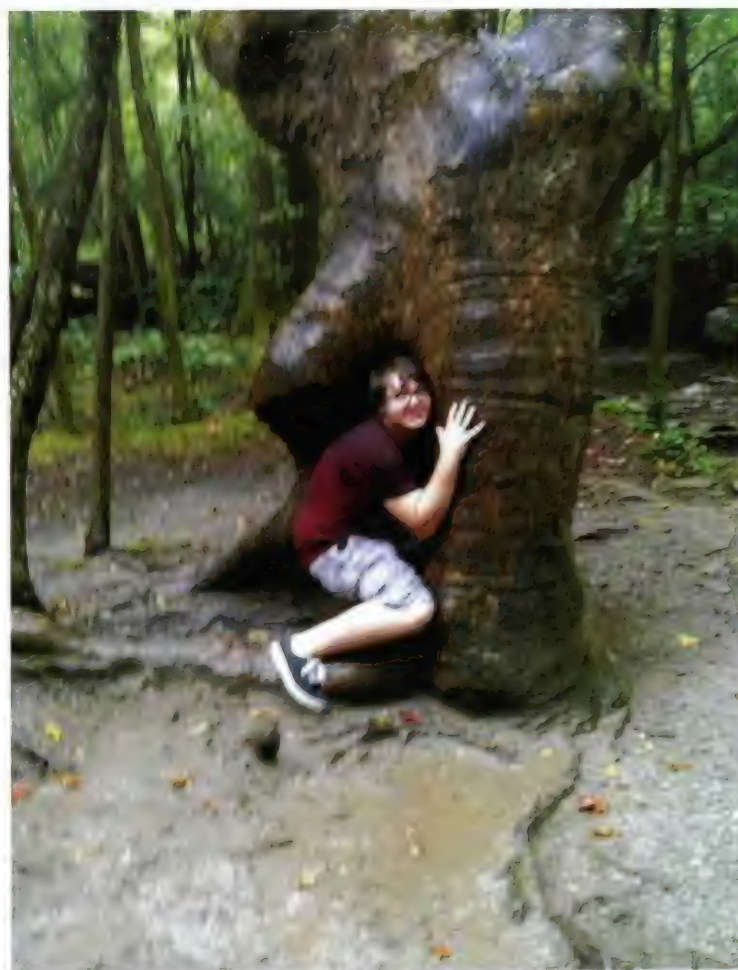
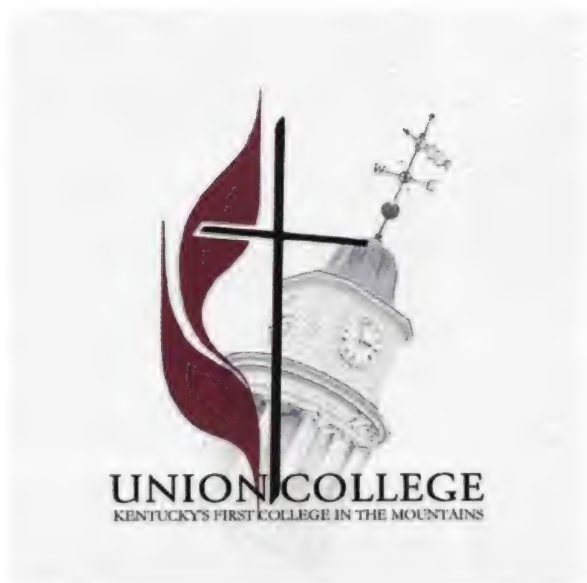
A group proposed in the Fall semester of 2009, Spiritual Mentors, is a spirit leadership program based within the student population. They are fellow students who want to welcome all faiths no matter feelings or beliefs. Anyone is welcome to seek their services. This group includes Joseph Brown, Samantha Sayre, Ellie Weaver, Daniel Greene, Samantha Caldwell and Josh Oros. This group is volunteer based and is willing to help anyone with any problem with spirituality or spiritual guidance.

These two strong groups are an inclusive Christian community who, "Welcome people of all faiths or no faith at all" and they mean it. Even in their annual trips, all are welcome. All one has to do is sign up for the fun. Most of these trips are amazing, as was their Fall retreat to Gatlinburg, Tennessee. All one has to do is sign up to get involved with the fun.

The Spiritual Life interns work closely with Common Partners, and plan just about as many things as they can into a school year. What started with three interns has grown to as many as nine and will likely only grow stronger as more students become involved. But without Reverend David Miller leading the charge and his Spiritual Life interns Jacqueline Bengie, Daniel Greene, Stefanie Edgell, Brianna Patel and Joseph Brown none of this would even be possible.

By: Raymond McGlone

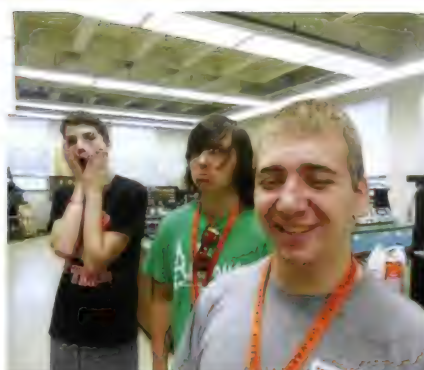




Sculptors for millennia have carved tombstones and obelisks and false gods from pliable yet sturdy calcium rocks such as marble and limestone. These rocks form when tiny sea creatures die and their calcium rich shells sink and pile up on the ocean floor (299).



Science Club



The Science Club held several meetings during which members discussed future career plans, graduate school visits and more. Specifically, on Saturday, Nov. 10, 2012, some eleven students led by Science faculty Advisor visited Lincoln Memorial University, LMU, Harrogate, TN from Union from 8:00 am till 3:00 pm to attend an open house organized by the University. The activities for the day included a tour of their state-of-the-art science facilities, sitting in on various conferences by several faculty, and specially one on Osteopathic Medical Awareness. Students also availed themselves of open discussions with various science faculty and program directors. A bunch of pictures taken to commemorate the visit were later sent to the Union Yearbook staff à toutes fins utiles!



Also the Science Club participated in the college Clubs and organization Day through a display table during which questions were answered from curious visitors and some new enthusiasts were signed up as Club members. Generally we received upward of 10 students / visitors during the 2-hour period ! The most fun part of the Science club is the meetings. The meetings are a fun and relaxing way to be around other members who are interested in the same general study area.



2012-2013 Officials
Sara Chasteen, President
Sarah Mills, Vice President
Audrey White, Secretary
Victoria Deaton, Treasurer
Kendra Gray, Event Planner
Michael Davenport, Public Relations
Dr. Fidelis Achenjang, Faculty Sponsor



Newman Club

The Newman club, hosted a number of mass events on campus, specifically upward of 35 new and returning students, staff and faculty joined the St. Gregory Barbourville catholic family on Sunday September 30, 2012 at 11:00 am at the Conway Boatman Chapel on campus to celebrate Mass of the Holy Spirit for Fall 2012 : a traditional welcome mass to insure a great and successful academic year, 2012-2013. Immediately after mass, we had FREE Pizza, courtesy of the Newman Club at the Heritage Conference Center for all. Also the Newman club hosted an Ash Wednesday Mass to help all



and sundry sketch their Lenten plans for 2013! The mass was held 13th Feb. 2013; 5:30 pm at the Conway Boatman Chapel, CBC during which each participant prepared him or her-self for the Lenten journey. This was some good start and deal, in anticipation of the long and oftentimes difficult journey that may have its ups and downs. Also, a couple of students and faculty also followed through the Lenten season by coming to St Gregory's church at 5:30 pm on Fridays (Feb. 15 through March

29th) to pray the Way of the Cross for the Faithful departed! Additionally, The Newman Club had a table displayed during the Clubs and Organizations day.

The "fun" part of the club, comes through mail such as given below... Dear brother, thanks for the reminder. Sometimes we get caught up in the tyranny of the urgent and forget the church calendar. I, as a former pastor, have administered the ashes. Very meaningful. Bless you on your journey on the Way of the Cross. God is faithful even when we cannot sense His presence. In Christ,...



Like all noble gases, helium glows when excited by electricity (303).

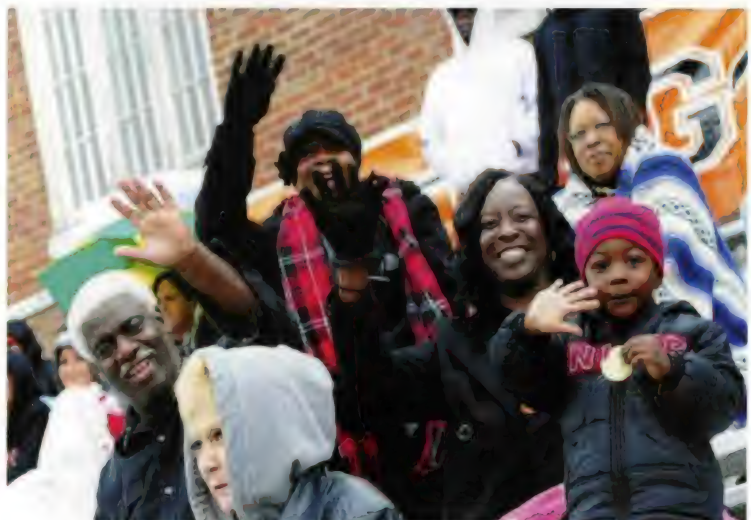
Homecoming



There were surprises all around on this year's Homecoming royalty. King Aaron McCollum was grateful and summed the win up with, "It felt pretty good. Never thought I would make it on the court and even to be named King." Queen Samantha Caldwell had also been shocked to hear her name over the PA. "I was really surprised to get it. But the best thing about it is that I get to hold it over Jon North's head because in high school he was named homecoming King and I was just named a princess."

International students and out of state students were not left out. From Germany, Helen Weber was named Princess. She explained, "I didn't expect to be voted on the homecoming court. We don't really have anything like homecoming back in Germany." Her Prince, Hugo Sanchez, was flattered with the honor and it couldn't have come at a better time. His father came from his home town of Dallas, Texas to watch the soccer game and got the bonus of seeing his son crowned Prince.

Even with the excitement of the new court and Homecoming activities, the day was a roller coaster on the athletic side. The Bulldogs trumped Berea in Men's Soccer with a 4-2 win while the Football team suffered a 14-10 loss against UVA-Wise.





Francium is so fragile it's basically useless, and even though there's (barely) enough of it in the earth for chemists to detect it directly, no one will ever herd enough atoms of it together to make a visible sample. If they did, it would be so intensely radioactive it would murder them immediately (332).



Wilderness Club



The Wilderness Club is a vigorous and life-changing experience. Club members get the chance to explore the area while also having fun with friends. This club offers outdoor adventures including hiking and backpacking, caving, climbing and rappelling, canoeing, kayaking and more, while also gaining a greater appreciation for the Appalachian culture. Chris Hammons, an active member commented, "The Wilderness Club has brought me so many opportunities to try new things and go on new adventures that I normally wouldn't do on my own. We also have a ton of fun!" Chris recalled one of his most memorable trips with the Wilderness Club, "We traveled to Cumberland Falls State Park where we took a three mile hike.



It was an easy and relaxing hike; one of the first hikes so that members could get a feel for the trips we take. What we didn't expect, however, was running across a pack of bobcats! It was a great scare and we didn't stop running until we were sure we were a mile away!" Some of the fun excursions the club has taken this year include hiking Cumberland Gap, canoeing on the campus pond, a Gap Cave tour, and kayaking. They also attended the Nantahala Outdoor Center Guest Appreciation Festival held in Wesser, North Carolina, with rafting, mountain biking, hiking, gear sale, demonstrations and festivities.

The Wilderness Club also hit a bump in the road this season. Andy Messer, leader of the club broke his leg at the beginning of the school year and was unable to lead many excursions. Members had to step up to the plate and guide many of the club's outdoor adventures themselves.

Andy Messer, Director of Outdoor Programs, had this to say about the participation in Wilderness Club, "Club Participation equals membership. Come to meetings, events, and trips, and—voila!—you're one of us. Club activities are open to all students, faculty, staff, alumni, community members, practically anybody. It's not a matter of filling out a form. It's a matter of joining in on the fun." As Andy said, The Wilderness Club is a spontaneous experience where anyone is welcome at anytime. This year, the Outdoor Program helped with the production of the new bike trail on Turner Outdoor

Center property, that was host to Union's first home cycling event! The course is located at the intersection of US 25E and Turner Loop, only about 4 miles from campus. The Wilderness Club takes great pride in this because cycling is the only intercollegiate sport offered at Union that is also a Wilderness Club activity.

The Wilderness Club provides its' participants with a chance to explore nature and make memories that will last a lifetime. Union's Wilderness Club is a great asset to the Appalachian area by giving participants the opportunity to tour and appreciate the region. This club is a chance for members to give back to the community. By offering many events such as hiking and biking others may gain the same knowledge and appreciation for the Appalachia's and learn to be proud of the beautiful surroundings.



Bubble science question: how do sound waves transmute bubbles into light? Tiny trapped bubbles respond to low pressure by swelling a thousand times, like a balloon filling a room. After the sound wave bottoms out, the high pressure front tears in and crushes the bubble's volume by half a million times, a force a billion times greater than gravity. Not surprisingly, it's that supernova crush that produces the eerie light. Most amazing, the bubble stays intact. The elemental flint-- which produces the light spark-- is argon (310-311).





Aaron McCollum



Kassie Patterson

The purpose of UTV is not only to showcase the talents of Union students but also to be used as an outlet for students to voice their thoughts and opinions creatively. The 1st time we produced UTV it was a 24 hour broadcast but the 2nd broadcast was only 3 hours of programming shown Friday, Saturday, Sunday and Tuesday, Thursday throughout the week.

The shorter broadcast was due to everyone's busy schedule and also made it easier to film, edit and produce. UTV's goal is to showcase the creativity of Union College students and their many talents. There are many people involved in UTV that work very hard in their free time to make UTV a reality. Mass Communication students Kassie Patterson, Ellie Weaver, Aaron McCollum, Sonny Whitson, Eric Kinman, Marah Rice, Krista Tuta, Jessie

Frisby, as well as faculty producer Dr. Marley, and staff producers Matt Mahony and Tommy Ruth. Without all of these people working so hard together UTV wouldn't be possible. My hope as a senior producer is that the students under me will continue the legacy of UTV and make sure that channel 62 is filled with Union's finest.



On set working



Interview with Dr. Marley



Jessica Frisby and Eric Kinman running cameras



Ellie Weaver in the spotlight



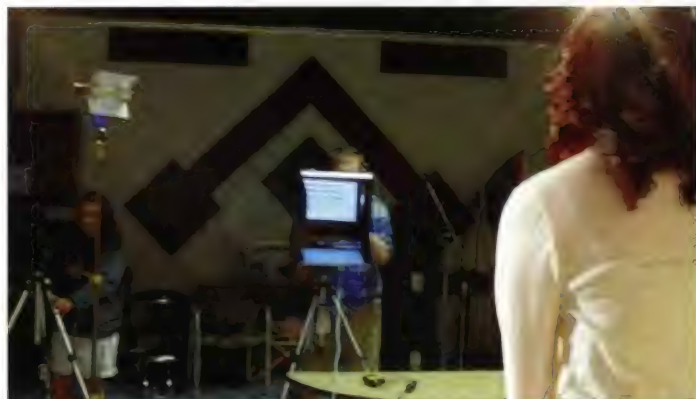
Sonny Whitson running audio



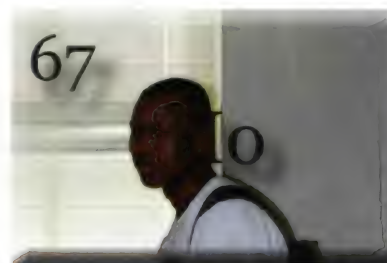
Eric Kinman on camera



Jessica Frisby on camera



Hodium is named after Stockholm, where it was first discovered (62).



Choir



Senior Cassy Kost and Dee Crescitelli

This year the Union College Choral program has been extremely productive with their concerts both in the spring and fall semesters. In the Fall they had a Christmas concert that many students had attended. One student Jessica Perkins who sat and watched her first choir performance this Christmas said "It was really good, I really liked their song choice." They continued as well in the spring putting on their annual Valentine's day concert, and their Spring Concert. Many

came and enjoyed the styles the UC Singers, Union Harmony, and Regional Chorus put on for the crowd.

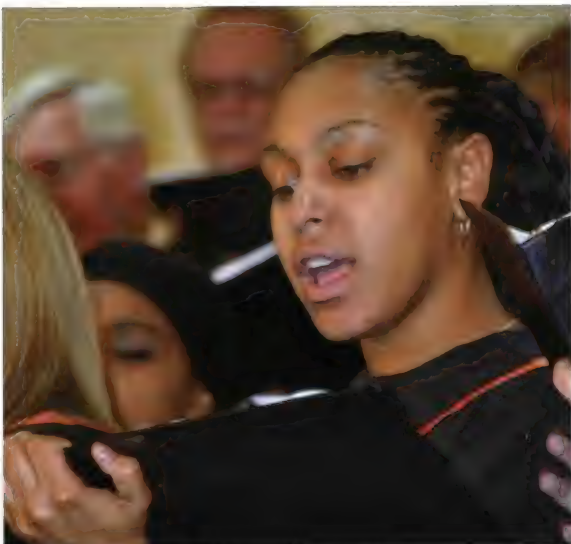
Choir director Virginia Gay Gandy States, "I am so pleased with all the choirs which make up the UC Choral Program. The UC Singers, Union Harmony, and the Regional Chorus start learning music in August for the Christmas Program and don't stop performing and learning new music until our final concert of the academic year in April.



In addition, this year we are honored to sing at Dr. Marcia Hawkins Inauguration Ceremony."

This year the Union choirs will play a big part into inauguration week, as they are singing while the new president Dr. Marcia Hawkins makes her way around, and processes through campus at her ceremony.





Senior Martika Willis



Sophomore Lauren Tipton, and
freshman Jennifer Jones.



Dee Crescitelli and sophomore
Rebekah Seifu prepare to sing.



Junior Krista Tuta



Quartet: senior Michael Poff, community member
Lorin Leake, bass Paul Jones, and Dr. Virginia Gay
Gandy



The heaviest elements are radioactive, and almost all-- most notably uranium --
break down into steady lead (73).





SGA every year tries to work on a project for the student body. A few years ago SGA began the "Lakeside Project." Richie Mathes, president of SGA stated SGA works to create enhanced living conditions for the student body. "We worked with James Jamerson head of Union Colleges Physical Plant adding gazebos, grills, lights, and fire pits by the lake and sand volleyball pit."

The project was a success. By the 2012-13 school year these facilities were available to the Lakeside residents. The extras helped to create a better campus life. I remember being outside at 12am playing volleyball with all my neighbors and classmates. The



games would become so intense with a good size audience. Noone cared about the time. With all of the commotion by the lake, some friends and I thought it would be fun to jump into the lake. About four others followed us in. It was fun.

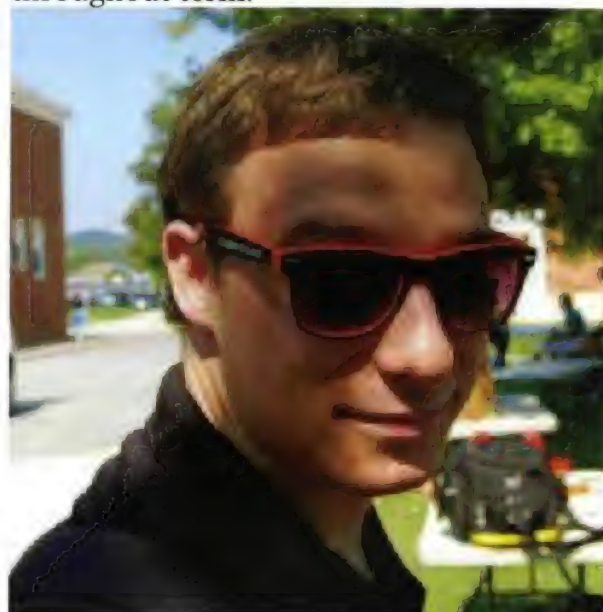
Families love to come and tailgate during the football games around this area as well. When the game is over families like to grill out with the students and enjoy each other's company. SGA's idea for the "Lakeside Project" was a huge success for the student body and makes us curious to see what they plan on doing next for the students.

SGA is an important organization. SGA is a campus' student body government consisting of a President Richie Mathes, VP for Student Development: Brittany Burchfield,

VP for Business Affairs: Andrew Long, VP for Athletics: Aaron McCollum, VP for Academic Affairs: Caitlin Scheidt and VP for Public Relations: Kassie Patterson. These officers represent the student body to the administration, board, trustees, and the President of the college.

To be an office holder for SGA "you have to meet certain criteria and be voted in by the student body to be a member," said Mathes.

Every person in SGA must be a full-time student by his/her term in office. Every candidate must submit an application, resume, and an essay describing interest, reasoning, and passion in running for the position. You must have completed 64 (24 for some other offices) credited hours, have and maintain a 2.5 GPA when and throughout term.





In past years some people might not have known that Union has a Gay Straight Alliance Club on campus. This year they made themselves known. The GSA held a pride week on campus to try and help promote the club and let students and faculty know that we have a GSA. Some events they held throughout the week were a field day by the volleyball courts where you could tie dye a T-shirt, a campfire by the lake, a showing of the movie "I now pronounce you Chuck and Larry", and finally the Dude looks like a Lady

dance. Cassy Kost says, "The problem in the past is that many people don't know about it. We're trying to get a lot of support and be seen." GSA wants all people, no matter what their sexual preference, to be able to communicate, interact, and get along. The ultimate goal is to try and help people be accepting of one another's choices and feel comfortable enough to ask questions. This year the GSA fund raised by selling lollipops in order to be able to travel to a pride Fest at the end of May.



Molybdenum can withstand excessive heat, melting at 4,750 F. Doping steel with molybdenum gums up the iron atoms, preventing them from cracking and failing. This makes for a very strong metal (89).



Residence Life

It was a rocky transition for new Resident's Life Graduate Assistant Kara Pile. At the end of Kara's senior year she decided she wanted to stay at Union to complete her masters. Kara worked out with Residents Life Director, Jared Hirtz, through the UC Crossfit. Jared encouraged her to apply to be his GA even though she had never been a Resident Assistant.

With the old GA moving, Kara only had two weeks to learn everything before Jared left for Military duty. Kara said, "It was a stressful, but an exciting time." Kara had a pile of things to accomplish before the RAs and residents returned, often working from morning to night. Between learning the job and preparing for the school year, Kara had to deal with some stressful moments with worried parents, missing keys, and multiple systems. With all her problems solved, she thought she was in the clear but during the first round of move-ins the machine that makes

IDs broke. She credits part of her success to people like Josh Oros, a previous GA, Barbara Teague, and Janet Merriam who helped her learn the systems, meal plans, and everything else in Residence Life but her problem solving is second to none.

The RAs agree saying, "Kara is a wonderful GA, she gets things done but knows how to be a friend. The girls and RAs know they can talk to her and can have a genuine conversation." Kara continues her duties as GA and hall director for Lakeside with a smile and not a single complaint despite her early problems.





Michael and Joey Davenport, fraternal twins from Delaware, Ohio, are both sophomores at Union and are on the bowling team. Approximately 32.2 out of 1000 newborns in the USA are twins. Students at Union College have the possibility to get to know eight sets of twins on campus this year.

This seems to be a really high number for a small college like Union. But for Joey and Michael Davenport it is nothing new as they mention, "It is weird because there are so many sets of twins here. But there were five sets of twins in our graduating class which was 160 students."

Joey and Michael enjoy being one of eight sets of twins, "It is nice having that many twins on campus because we have plenty of people to relate to. As twins, there are certain stories and events in your life that only other twins can relate to." Joey explains Michael's statement further, "Growing up, there was always someone there no matter what. He is not only your twin but also your best friend. And this kind of relationship only other twins can relate to."

Being a twin at Union means they get discount for having siblings at Union at the same time, but it's also lots of fun. Michael tells, "We had the opportunity to play in the twin version of the roommate game. It was us against two other sets of twins." The two other sets of twins were Jacob and Caleb Spurlock and Daniel and Derrick Phipps who are both identical twins, which often leads to misunderstandings on campus. Daniel Phipps says, "We both accept

the fact that most people that are not consistently around us, cannot tell us apart. So when we share a class that the professor does not call roll by name, we have an advantage. If they cannot tell us apart and one of us is present in class, how can the other be penalized for not showing up?"

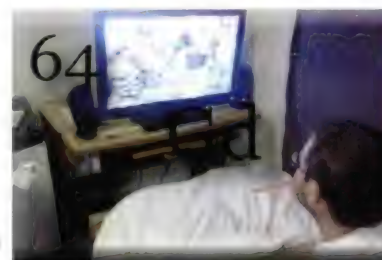
But this did not help for the roommate game modeled for twins. Michael explains, "We had to answer questions that only the other twin would know and we had to earn the most points to win." One of the questions was what the most memorable moment as a twin: "In fifth grade we dressed up as Siamese twin girls for our annual Halloween walk. We were wearing make-up and high heels."

They might not be Siamese twins or even identical, but their friends can easily tell Joey and Michael are twins even though they are completely different people. Brittany Calhoun, a friend of the twins, says they are mostly different in their personalities. "Joey is more relaxed, laid back, and Michael is more organized, everything has to be clean. He is very sophisticated. Joey is more unconventional." Of course, they also have similarities, "They have the same actions, like gestures and they walk the same. They tell stories the same way."

This becomes obvious when they together tell one of those typical twin stories; they interrupt each other, bring up new aspects, and finally complete their story perfectly together, "In High school, we told our chemistry teacher on the first day of class that we were cousins. Half way through the year she changed the seating arrangement and told me and Michael to come up front. As I was walking up there she yelled at me and said: I told Michael to come up here and not Joey. After telling her that I was Michael she said: Wow, you guys look awfully alike for just being cousins."



Michael and Joey are the only fraternal twins of the eight sets. Joey says, "I like being fraternal but it is funny because people always think that we are identical." Michael agrees, "I like being fraternal because we look enough alike for people to confuse us but not exactly alike to confuse everyone."

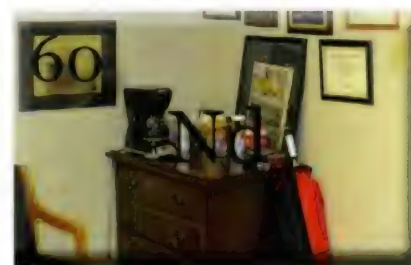


Co-Curricular Awards

Alumni Student Service Award: Cody Thompson
 Melva and Kathy Brick Award: Louis Paschal Glavinios, Jr.
 Female Athlete of the Year Award: Lindsey Waters
 Danny Drinkard Award: Zachery Eagler
 Male Athlete of the Year Award: Wesley Lamberson
 Baseball: Most Improved: Jake Janutolo
 Baseball: Bulldog Award: Travis Kottenbrock
 Cheerleading: Bulldog Award: Carrie Buck
 Cheerleading> Most Improved: Amanda Lee
 Graduating Bonner/Common Partners Senior: Zachery Eagler
 Staff Volunteer of the Year: Peter Haile
 Faculty Volunteer of the Year : Jennifer Hatfield
 Faculty Volunteer of the Year: Sarah Hendrix
 Student Volunteer of the Year: Justin Hyde and James Jamerson
 Graduating Bonner/Common Partners Senior: Christy King, Samantah Sayre, Cody Thompson
 Volunteer Club/Organization of the Year: Social Players Guild and Student Government Association
 Athletic Team Community Service Participation Award: Volleyball
 Football: Bulldog Award: Zachery Eagler
 Football: Most Improved: Joseph Ryan Shipley
 Men's Basketball: Most Improved: Archie Adams
 Men's Basketball: Bulldog Award: Kyle Bush
 Men's Bowling: Most Improved: Joseph Davenport
 Men's Bowling: Bulldog Award: Keith Venis
 Men's Cross Country & Track & Field: Most Improved: Matt Francis
 Men's Cross Country & Track & Field: Bulldog Award: Bill Ed White
 Men's Cycling: Most Improved: Raymond Dangelmaier
 Men's Cycling: Bulldog Award: Wesley Lamberson
 Men's Golf: Most Improved: Ryeann Gamble
 Men's Golf: Bulldog Award: Garrett Bradley
 Men's Soccer: Most Improved: Dawson Marcum
 Men's Soccer: Bulldog Award: Hugo Sanchez
 Men's Swimming: Most Improved: Aaron Bean
 Men's Swimming: bulldog Award: Yan Rocha
 Pep Band: Graduating Senior : Brittany Burchfield
 Pep Band: Graduating Senior : Nichole Grindler
 Sociology Club Award: Graduating Senior: Samantha Sayre
 Sociology Club Award: Graduating Senior: Martika Wills
 Softball: Bulldog Award: Kori Hammons
 Softball: Most Improved: KelseyMorgan
 Outstanding Peer Tutor: Michael Davenport
 Outstanding Supplemental Instructor: Kendra Gray
 Outstanding Peer Mentor: Carla Jackson
 Special Programs: Highest GPA: Aaron McCollum
 Spirituality Award: Plumline Award: Jacqueline Jackson
 Spirituality Award: Senior Award: Samantha Caldwell
 Spirituality Award: Shepherd Award: Samantha Caldwell
 Spirituality Award: Staff Award: Jodi Carroll
 Spirituality Award: Above & Beyond Award: Alexandra Estes
 Spirituality Award: Intern Award: Daniel Greene
 Spirituality Award: Senior Award: Joshua Oros
 Spirituality Award: Spirituality and Academics Award: Susan Poff
 Spirituality Award: Senior Award: Samantha Sayre
 Spirituality Award: Senior Award: Mary Beth Spurlock
 Spirituality Award:UMC Yes! Video Award: Ellie Weaver



Student Ambassadors: Rookie of the Year: James Becknell
 Student Ambassadors: Graduating Senior: Morgan Brown
 Student Ambassadors: Graduating Senior: Samantha Caldwell
 Student Ambassadors: Graduating Senior: Tanya Eustrom
 Student Ambassadors: Graduating Senior: Aaron McCollum
 Student Ambassadors: Graduating Senior: Caitlin Merritt
 Student Ambassadors: Graduating Senior: Joey Peak
 Student Ambassadors: Ambassador of the Year: Joey Peak
 Student Ambassadors: Graduating Senior: Caitlin Scheidt
 Student Ambassadors: Graduating Senior: Lisa Wagner
 Student Ambassadors: Ambassador of the Year: Lisa Wagner
 Student Ambassadors: Graduating Senior: Krystal Webb
 Student Development: Rising Star Award: Kimberly Alexander
 Student Development: Rising Star Award: James Becknell
 Student Development: Most Contributing Faculty or Staff Award: Dan Covington
 Student Development: Full Circle Award (180 degrees): Arthur Derico
 Student Development: Civic Engagement Award: Zachery Eagler
 Student Development: Civic Engagement Award: Roberta Ferrel
 Student Development: RA 1 year of service: Nicole Grindler
 Student Development: Most Contributing Faculty or Staff Award: Peter Haile
 Student Development: Commuter of the Year: Alex Jones
 Student Development: CIRCLES Award: Alex King
 Student Development: Full Circle Award (180 degrees): Christy King
 Student Development: RA 2 year of service: Cassy Kost
 Student Development: RA 3 years of service: Joshua Oros
 Student Development: Commuter of the Year: Briana Patel
 Student Development: RA 2 year of service: Samantha Sayre
 Student Development: CIRCLES Award: Caitlin Scheidt
 Student Development: Most Outstanding Club or Organization: Social Players Guild
 Student Development: RA 3 years of service: Cody Thompson
 Student Development: RA of the Year: Brittany Zins
 Student Development/SGA: Above & Beyond Award: Cassy Kost
 Student Development/SGA: Above & Beyond Award: Aaron McCollum
 Theatre: Gold: Alexandra Estes
 Theatre: Bronze: Aaron Farmer
 Theatre: Silver: Rebekah Seifu
 Volleyball: Bulldog Award: Caitlin Merritt
 Volleyball: Most Improved: Heather Faith Welch
 Women's Basketball: Bulldog Award: Taylor Atkinson
 Women's Basketball: Most Improved: Sarah Scruggs
 Women's Bowling: Most Improved: Kimberly Alexander
 Women's Bowling: Bulldog Award: Christy King
 Women's Cross-Country & Track & Field Bulldog Award: Christa Hicks
 Women's Cross-Country & Track & Field Most Improved: Danielle Jasiewicz
 Women's Cycling: Most Improved: Mary Beth Martinez
 Women's Cycling: Bulldog Award: Kara Uhl
 Women's Golf: Most Improved: Sydney Smith
 Women's Golf: Bulldog Award: Brittany Zins
 Women's Soccer: Most Improved: Jessica Frisby
 Women's Soccer: Bulldog Award: Helen Weber
 Women's Swimming: Bulldog Award: Tanya Eustrom
 Women's Swimming: Most Improved: Lexus Thompson
 Yearbook: Stespean Award: Jessica Frisby



Neodymium makes unprecedentedly powerful lasers (94).

Student Ambassadors



"We are a very hard working group. We all do our own part to help the campus and do the best we can to represent the school in a great way" says Student Ambassador and billboard star Tanya Eustrom. She adds, "We represent the school, give tours to potential students, host open houses, senior days for nearby high schools and work orientations during the summer."

"One of my greatest memories as Student Ambassador president was during Operation Preparation for local high school sophomores. This two day event was held on campus and required all Ambassadors to help. It was great to see each and every Ambassador give time and effort to this cause. Everyone worked together and even though things got a little hectic at times, the Ambassadors always remained calm, had a good attitude and had a good time with students. This is what being a Union College Student Ambassador is all about."

--Michael Davenport



WE ALL HAVE A LITTLE SUPER POWER

UNION COLLEGE SUMMER ORIENTATION 2012



It's not all hard work though. There are always pre-orientation shenanigans, winter retreats and bets where the loser has to jump in the lake. "I remember when we were playing Hide-N-Seek two years ago before orientation and as I was running to base, I tripped over a tree stump and landed on my face," Tanya embarrassingly remembers.

With all the work and play, the Ambassadors learn valuable lessons of team work and communicating with others. Wallflowers bloom, social butterflies fly and memories are created every day with the Student Ambassadors.



"My favorite memory from Student Ambassadors is on our retreat. I didn't know many of the Ambassadors but they were great. They accepted us freshmen into their family and now I feel very much involved in the program. I can't wait for the years to come with the group and it's all about the way the old Ambassadors treated us during our first retreat."

--James Becknell

Scandium is used as a tungstenlike additive in aluminum baseball bats and bike frames to make them lightweight and super strong (94).



Yearbook staff



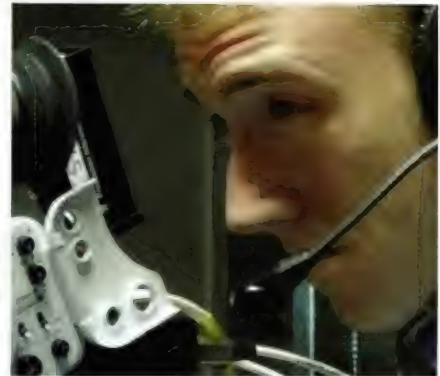
Name: Krystal Webb
Year: Senior
Major: Mass Communications and English
Hometown: Paris, Ky.
Activities: Student Ambassador, Yearbook Editor, Sports Information Intern, Honors Community, Alpha Psi Omega, 2011-12 Stespean Award winner.

Name: Ellie Weaver
Year: Sophomore
Major: Mass Comm
Hometown: Springfield, Mo
Activities: Residence Life, Spiritual Life Mentor, Softball, UTV, Yearbook



Name: Devin Frederick
Year: Freshman
Major: Computer Information Technology
Hometown: Barboursville, Ky
Activities: Yearbook, UTV (Tech Talk)

Name: Eric Kinman
Year: Senior
Major: Mass Communications
Hometown: Erlanger, KY
Activities: Union College Varsity Track Team, Student Athlete Advisory Council (SAAC), Yearbook, and Fall 2012 On-Campus Intern for Career Athletes.



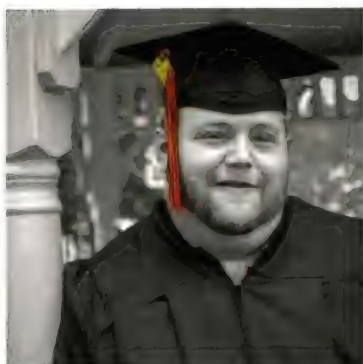
Name: Krista Tuta
Year: Junior
Major: Mass Communications
Hometown: Apple Valley, CA
Activities: Women's Golf, Yearbook, Peer Mentor, International Club, UC Singers, Newly elected SGA VP Public Relations 2013-2014, UTV, CAB, Cultural Events Committee

We would like to give special thanks to the following for their time, pictures, and stories: Missy Frederick, Denise Hoover, Sarah Weaver, Jay Stancil, John Gatto, Dr. Candy Wood, Barbara Teague, Kathleen Crossen, and Dr. Fidelis Achechang.

Yearbook advisor: Dr. Christine Marley-Frederick

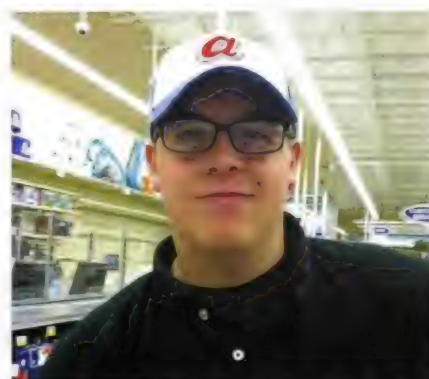
All the quotes for the elements are from: Sam Kean (2010). *The Disappearing Spoon*. Back Bay Books: New York.

Name: Jessica Frisby
 Year: Sophomore
 Major: English/ Mass Communications
 Hometown: Russell, Ky
 Activities: Member of UC Women's Soccer team,
 UTV, Yearbook, 2012-13 Stespean Award winner

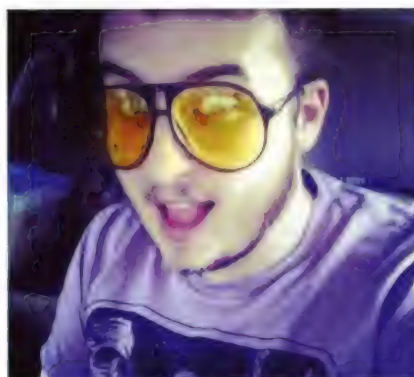


Name: Sonny Whitson
 Year: Senior
 Major: Mass Communication
 Hometown: Frankfort, Ky
 Activities: Member of the Union College
 Singers, Harmony and Regional Chorus,
 Yearbook, Student Ambassadors, Bonner
 Scholar

Name: Drew Elliott
 Year: Sophomore
 Major: Mass communications
 Hometown: Ooltewah, Tn
 Activities: Football, yearbook



Kayse Cornett
 Sophomore
 Pre- Nursing
 Women's Soccer Team and Women's Track and
 Field Team, Nursing Club, International Club,
 Yearbook



Name: @JNortho (Jon North)
 Year: Senior
 Major: Mass Communications
 Hometown: Red Bird, Kentucky
 Activities: Mild mannered CAB worker by day, superhero
 by night. Saving the world one campus at a time.

There's a good chance you have tantalum or niobium in your pocket right now. Both are dense, heat-resistant, noncorrosive metals that hold a charge well-- qualities that make them vital for compact cell phones (95).



ELEMENT 3: Academics

3

Aca

Ever changing, growing, evolving, expanding. Bunching together and pushing apart. Various in numbers of combinations of protons and electrons. Neutrons remain neutral.

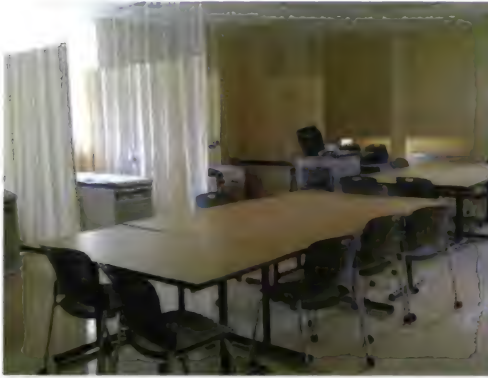
1 H Hydrogen 1.0079								
3 Li Lithium 6.941	4 Be Beryllium 9.0122							
11 Na Sodium 22.9897	12 Mg Magnesium 24.305							
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.9559	22 Ti Titanium 47.867	23 V Vanadium 50.9415	24 Cr Chromium 51.9961	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.9332
37 Rb Rubidium 85.4678	38 Sr Strontium 87.62	39 Y Yttrium 88.9059	40 Zr Zirconium 91.224	41 Nb Niobium 92.9064	42 Mo Molybdenum 95.94	43 Tc Technetium (98)	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.9055
55 Cs Cesium 132.9055	56 Ba Barium 137.327	57 La Lanthanum 138.9055	72 Hf Hafnium 178.49	73 Ta Tantalum 180.9479	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217
87 Fr Francium (223)	88 Ra Radium (226)	89 Ac Actinium 227.03	104 Rf Rutherfordium (261)	105 Db Dubnium (262)	106 Sg Seaborgium (266)	107 Bh Bohrium (264)	108 Hs Hassium (277)	109 Mt Meitnerium (268)

58 Ce Cerium 140.116	59 Pr Praseodymium 140.9077	60 Nd Neodymium 144.24	61 Pm Promethium (143)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25
90 Th Thorium 232.0381	91 Pa Protactinium 231.0359	92 U Uranium 238.0289	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)

								2 He Helium 4.0026					
								5 B Boron 10.801	6 C Carbon 12.0107	7 N Nitrogen 14.0067	8 O Oxygen 15.9994	9 F Fluorine 18.9984	10 Ne Neon 20.1797
								13 Al Aluminum 26.9815	14 Si Silicon 28.0855	15 P Phosphorus 30.9738	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 Ar Argon 39.948
28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.409	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.9216	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798					
46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6	53 I Iodine 126.9045	54 Xe Xenon 131.293					
78 Pt Platinum 195.078	79 Au Gold 196.9665	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.9804	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)					
110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (277)											

65 Tb Terbium 158.9253	66 Dy Dysprosium 162.5	67 Ho Holmium 164.9303	68 Er Erbium 167.259	69 Tm Thulium 168.9347	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967
97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

Nursing



Nursing classroom

Union announced the new nursing program on June 17, 2011. The program was created to help increase the number of bachelor's-prepared nurses in southeastern Kentucky. The Associate Professor of Nursing Dr. Sheila Chapman, discusses how Dr. Lorene Putnam has successfully created a nursing program at Union. Dr. Shelia Chapman, Associate Professor of Nursing, knows first-hand all of the work that was put into the making of the program and was more than willing to share a few details. She says, "Lorene Putnam has been working on the nursing program for two years now.



Staff in front of nursing painting.

We will be accepting our first class fall of 2014. We already have students here taking the prerequisites they need to get into the program. The nursing building will be located here at Union College and nursing students will also be doing clinicals at hospitals across the region."

One of those students is junior Josh Miller. He states, "I love working with other people and I really enjoy taking care of others. It's something I can see myself doing for a long time. I'm very excited to get my career underway." Chapman also has no doubt Union College won't have any trouble



Nursing professor teaching.

competing against nursing programs at big schools such as UK and ECU. She states "I think it will provide a special need with the small class sizes. It will go along with the Union philosophy 'One to One' while still providing a good education. We will also have a high tech lab just like the bigger schools. Our plan is to integrate the tech lab with hands on work so students don't lose the caring part of nursing."

The nursing program's future home is the former Knox County Hospital building. Very soon, Union will finally have its very own nursing program and all of the hard work put in by the nursing staff will have finally paid off.



Nursing students finishing class.



Nursing Staff with Mr. Stiver.



Nursing staff in front of class

Athletic Training



Casey Camargo taping an ankle.



Jennifer Skirl applying Stim.



Johnna Yeager and Noel



Erin taping a football player on the sideline.

With the majority of Union College students being athletes, it's no surprise athletic training is one of the most popular majors offered. Seniors in the program, Casey Camargo, Jennifer Skirl, and Stephanie Burton give a little insight as to what it's like being an athletic training major. What most people don't realize is that they are required so much more education than just attending different sporting events.

Casey explains, "We have both labs and clinical hours in which we do hands on training. We do our clinical hours in the athletic training room where we help develop and run athlete's rehab. At practices and games we help tape and prepare athletes for their activities, as well as in a general medical location where we follow and assist local physicians throughout their day." Casey also shares why she thinks athletic training is so popular at Union, "I believe that the athletic training major is a fun and interesting major that allows students to stay close to sports as well as close to the medical field."

Jennifer states why she thinks Union's athletic training program is a success, she says, "I feel like the program has prepared me for my career. I believe the professors and athletic trainers have provided me with the necessary skills and knowledge to be a successful trainer." Like any medical profession, athletic training provides a gratification that makes the all the work worthwhile. Stephanie elaborates, "Helping others brings me great satisfaction and the profession of athletic training provides this opportunity on an hourly basis. Assisting student athletes to achieve their goals and fast return to play is the most rewarding opportunity that athletic training provides."

Because the athletic training program thrived over the last few years, they are currently undergoing the process to become accredited.



Dysprosium means "little hidden one," since it's tricky to separate from its brother elements (239).

Sciences

Chemistry

Wesley Lamberson is the reigning NCCA Division II National Champion cyclist (2012), a member of the Honors Program and a chemistry major. Lamberson, or 'Wes', as everyone calls him, is always in pursuit of great performances, be it on trails or in the classroom. Wes took his first chemistry class during 9th grade and has been fascinated with chemistry ever since.

Wes believes the most important aspects of Union's Chemistry program includes the effectiveness of the 1:1 work with Dr. Fidelis Achenjang, the possibility of taking initiative, and working by oneself or in small groups. Wes also says the flexibility of schedule is essential for him to succeed in his science major since he is required to attend lab 2 or 3 times every week as well as finding time for cycling and his honors schedule. He says his ability to think about different solutions for problems is the best thing he has learned from his experience in Union's Chemistry program.

Professor Achenjang proudly mentions Wes' hard work and attention to details. After acquiring his Bachelor's degree, Wes plans on attending graduate school for a diploma in Nutritional Science or Biochemistry.

Wes compares himself to silicon: "It is a very versatile element which bonds with almost anything. Likewise, my desire is to form many relationships and to have very strong ones with some people, to keep them close."

By: Vitoria Oliveira



Sophomore math major Robin Kinman can frequently be found with her head buried in a book of equations. Robin says "I chose math as a major because it challenges me and I learn something new everyday." As if Robin needed more challenges, she is married and has two daughters under the age of two.

A math degree at Union College involves taking increasingly complex math courses. "Yeah, the courses seem to get very difficult at times but your professors work with you to make sure you get the information down" Robin states. Robin says she gets her questions answered and help when she needs it. Robin has thought about becoming a math teacher, but as a sophomore she still has time.

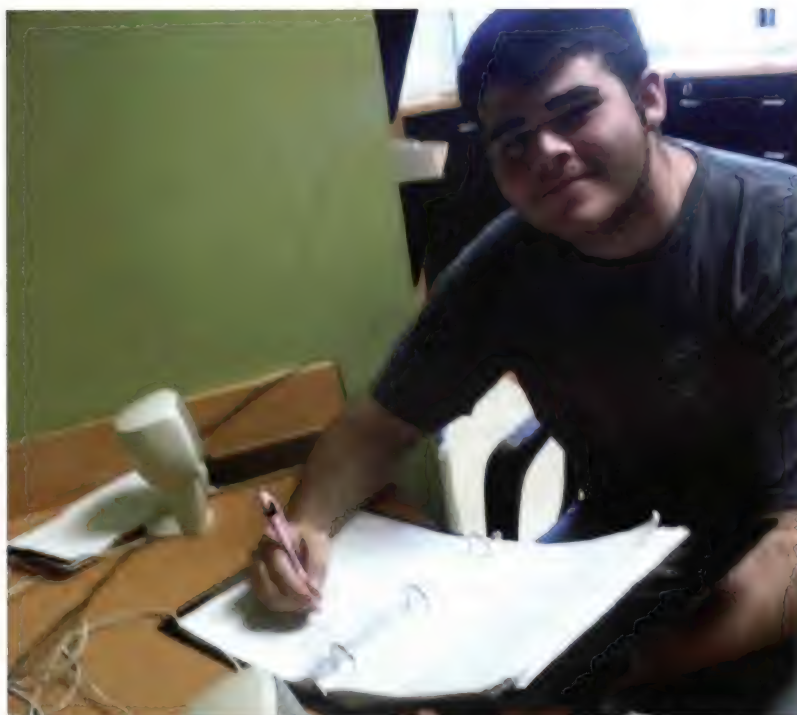
By Eric Kinman



Junior Mathematics major, Tyler Ledford is preparing to be an elementary math teacher. In the picture left Tyler is up at 6 am trying to get some last minute quick studying in before he ends his midterm week with his math exam which he spent four hours a day for the last four days trying to prepare for.

When asked why he wants to be a math teacher he says "because I love working with kids and I can communicate with children pretty well." When Tyler was a junior in high school, his class did community service by reading to children at the elementary school. He enjoyed it. It really made him happy and he was successful and that is when he knew what he wanted to be when he grew up. In the future Tyler hopes to be a math teacher for a long time and instill a love of math in thousands of children. Great goal, Tyler!

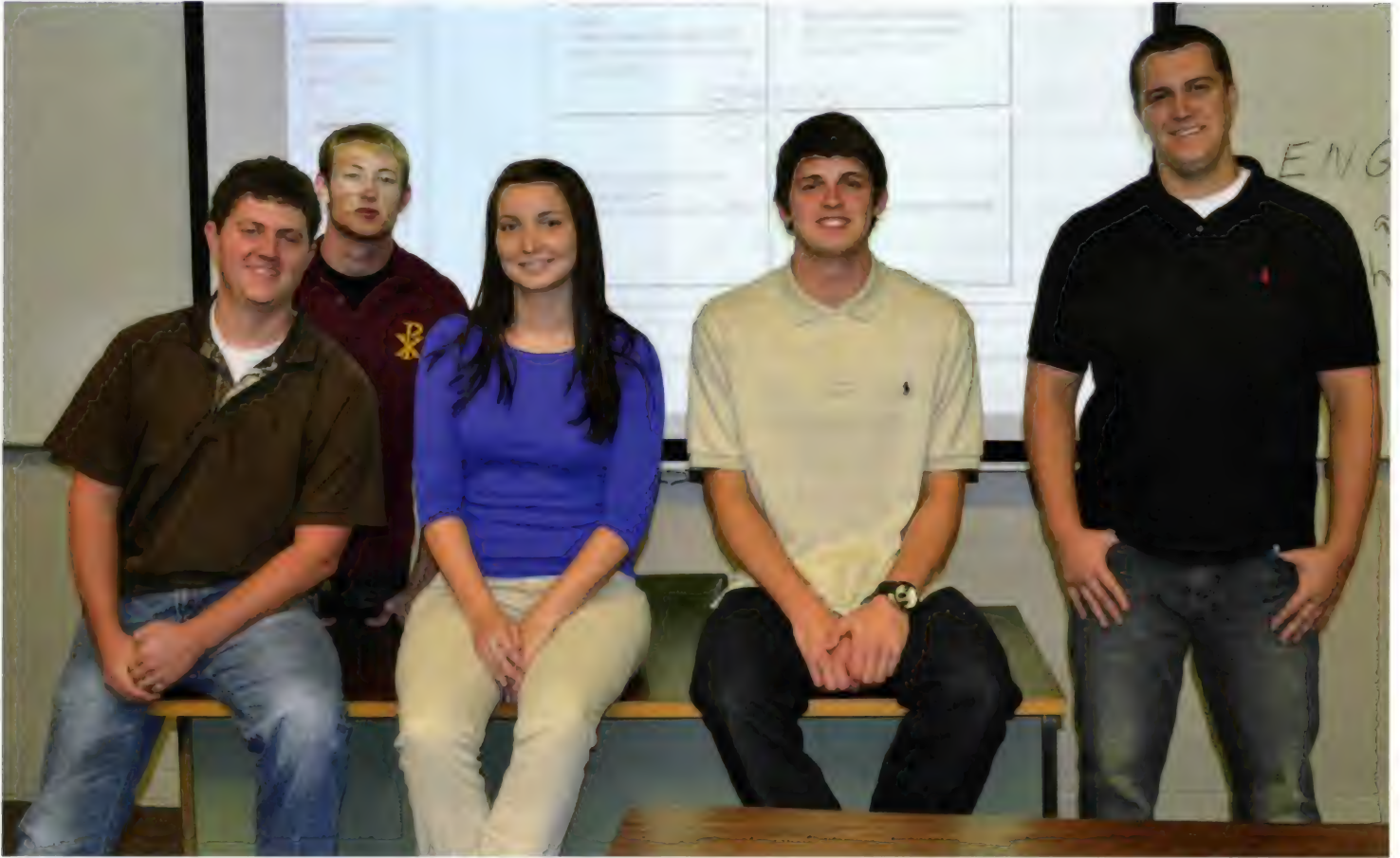
By Tommie Hayes



Promethium is named after the Titan in Greek mythology who stole fire, gave it to humankind, and was tortured by having a vulture dine on his liver (103).



Business & Marketing



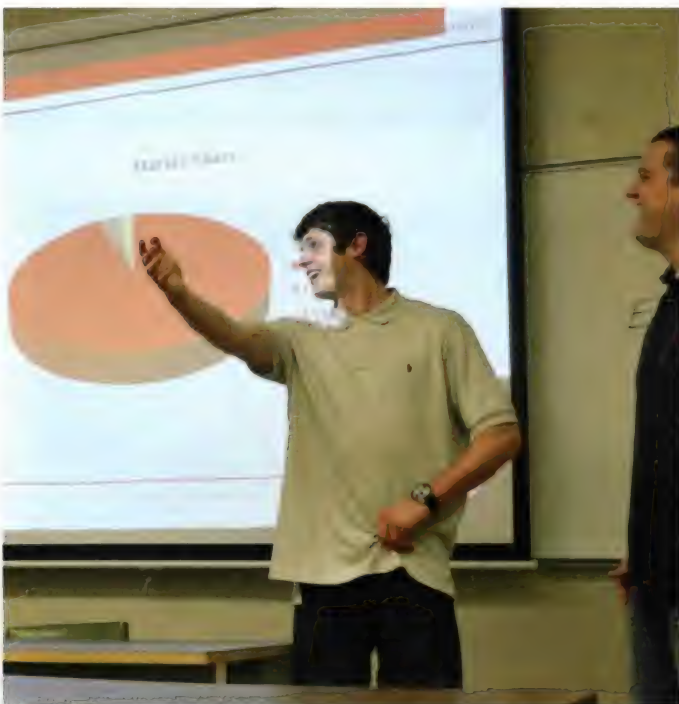
Teamwork

Business majors are the future corporate office holders and entrepreneurs of Union College. Dr. Lee's Principles of Management class did a case study over the Failure of eBay in Japan with a PowerPoint presentation to accompany it.

Celena Sporles, Tyler Robinson, Robert Hardee, Daniel Munkholm and Greg Doering were one of three groups to present their research findings on why eBay is failing. Though they are a group of five people, they each have to pull their own to gather the proper research and correct information. Finally coming together in the end with each person's findings to put it all together to create an informative presentation. "We each had our own piece of the project to do, then we met in the end to put it together," says Sporles.

As soon as class started you could tell this group knew how to get things done and work well as a team. They all work together before the presentation to finalize it and get all the information they each have to tell together as one. When they were presenting you could tell how well they worked together as a team to make a successful presentation.

These individuals will do mighty things in life by the motivation they have to dedicate their time to class assignment, as well as their great ability to come together as a team; this will carry into their lives beyond Union College. The power of a team can accomplish far more things than one individual trying to save the world.



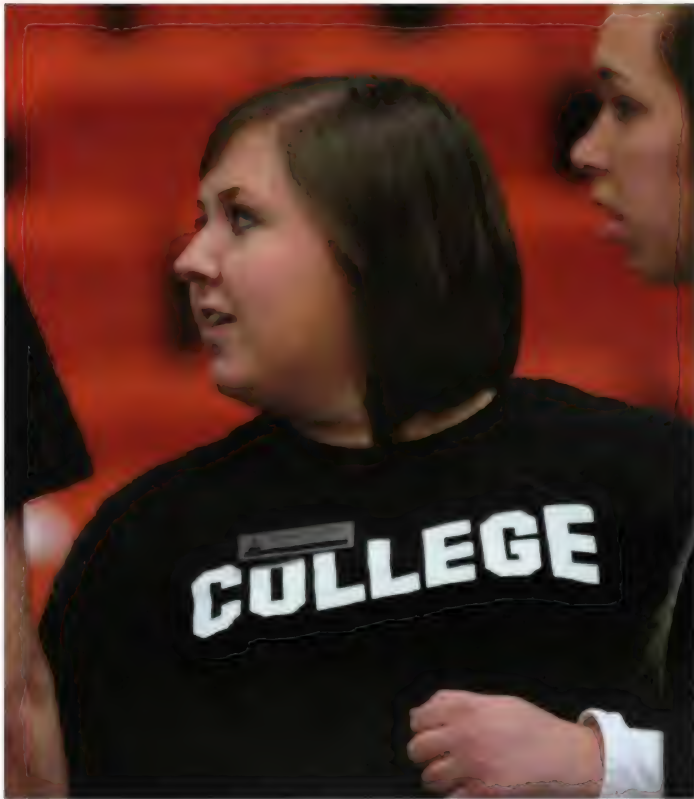
English philosopher Bertrand Russell wrote, A deficiency of iodine will turn a clever man into an idiot. Mental phenomenon seem to be bound up with material structure (199)



English

In 2011, Rebekah Griffith came to Union College as a freshman dreaming of the unique new experiences and promising future only Union can provide. However it wasn't long before she began to suffer from a serious inner struggle. Like all new students, Rebekah had been given advice from faculty and experienced students on time management, making smart decisions, and most importantly to choose a major early on. She began to feel the pressure to make a decision. After weighing all of her options English became her top choice, nevertheless she was a little apprehensive about committing to it.

"I was very nervous about my experience in high school. I didn't have a strong English background, so adjusting to the writing style and checking grammar was difficult for me," said Rebekah.



At last she pushed past her fear and doubt and declared English as her major. Now a sophomore, she is performing well in all of her courses and couldn't be happier with her decision.

She says, "I know I made the right choice. My favorite thing about being an English major is getting to research different topics. I love having the opportunity to research a new subject and present it. It's something I look forward to."

Not only did Rebekah commit to a major, she has had a tremendous amount of success over the last two years including becoming a Student Ambassador, a member of Common Partners, and also presenting at the Blue Ridge Undergraduate Research Conference under the guidance of Dr. Confer. In a situation where others would be rattled, Rebekah didn't crack, explaining, "I was very nervous a few days before speaking, but on the day of the conference, I was strangely calm but also excited to speak. You would think speaking in front of an audience, especially a room full of scholars, would be very nerve wrecking but it wasn't at all". With her experiences, Rebekah plans on pursuing a Masters in Education.



Mass Communication

Its lights, camera, action for Union College student Eric Kinman as he sets up one of the school's studio equipment cameras in preparation for an interview. Kinman, whose primary focus is in broadcasting puts in many hours behind the camera and in the field interviewing students and staff about Union events.

Kinman is also a designer and project worker on the school's yearbook. The program, according to Kinman "allows me to have access to studio grade equipment and computer editing programs and broadcasting opportunities. I'm furthering my knowledge and wits in journalism and general broadcasting." With his shot ready, and goals oriented, Kinman is pursuing his broadcasting dreams.

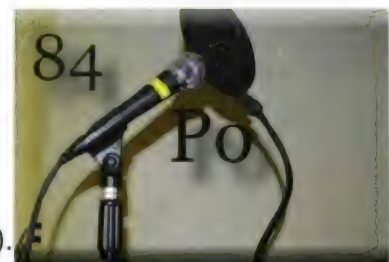
Krystal Webb, editor of the yearbook can often be found with her focus on a computer screen, combing the files for just the right photo to work with, picking the right color for the headline, or creating a layout in InDesign. Kassie Patterson and others work in the College Communications office creating podcasts for the Union community and articles for the alumni magazine. Jon North, Vitoria Oliveira, and Matt Mahoney live streamed football and soccer games online. Mass Communication majors are busy producing.

While others keep their noses in the books or staring at a computer, you can find the Mass Communication students Steven Middleton and Emily Baker with their heads in the clouds. These two highly creative students work with film and video. They bring their own style to the studio and their films. They are working on a lighting effect for an upcoming feature. Middleton said of the project "I love creating video. It gives me the freedom to do what I want, be creative in my own way, and of course, there are zombies."

There is a passion to have a hands on, personal teaching style driving Mass Communication students to present new and invigorating intellectual properties. Students are looking to shape the future of mass media by working with radio, print, podcasting, video, and social media.

Writers: Steven Middleton & Sonny Whitson,

Photographers: Steven Middleton & Sonny Whitson



Marie Curie, after running experiments to purify uranium, noticed the leftover waste was three hundred times more radioactive than uranium. It took years of tedious work, but was consummated with two new elements (Polonium and Radium) far, far more radioactive than anything before --and a Nobel Prize in 1911 in Chemistry (205).

History and Religion



Religion major Joseph Brown enjoys the on campus church service with his friends.



Reverend David Miller

This year the History and Religion majors seemed to be high in involvement here on campus. With busy academic schedules, these students still find time to make themselves known and be a big part of Union College. Senior Samantha Sayre states, "Being a History major allowed me to walk and talk with some of the greatest people who ever lived. I conquered alongside Alexander the Great, faced the Spanish Armada down with Elizabeth Tudor, sat and listened while Socrates lectured, and celebrated in 1920 as women got the right to vote. I lived alongside all of History, if only for brief moments."



Graduating History major Samantha Sayre on a history trip.



History and Religion major Christian Bruce travels through harsh winter weather to get to class.

Performing Arts

A lot has been going on around campus in performing arts. The music department put on three concerts and sang for the President's inauguration. The theatre department put on a play both in the Fall and Spring semesters. The performers got lots of excellent feedback from the campus community. Sophomore Alexandra Estes, says "This year I got to experience theatre from the perspective of an actor and a stage manager. Both experiences provided me with the opportunity to work with amazing groups of people. They also helped me grow in character, spirit, and as a person in general. Theatre teaches us not only how to become someone else, but it also helps us find ourself and to reach out to others. This is what I love about being a theatre major."



Alexandria Estes playing her role in the play "Doubt".



Union Harmony member Michael Poff sings in the Atrium at Sharp Academic Center.



Freshman Maggie Watkins, and Sophomore Marisa Sammons prepare to sing in Union College Singers for the Christmas



Sophomore Rebekah Seifu enjoys helping out during the Spring play, in the theatre department.



Music Director Dr. Virginia Gay Gandy helps warm up Regional Chorus member Bob Hoskins before the winter performance.



Theatre Director Dr. Diane Montgomery enjoys a good laugh while trying to direct.

Tellurium, a vampirish element was first isolated in Transylvania in 1782. It smells pungent, like garlic magnified a thousand times (226).



Psychology

Amy Jenkins, Assistant Registrar at Union, was born in Barbourville, KY but grew up in Daytona Beach, FL. She moved back to Kentucky after high school to attend Union College but after getting married and starting a family wasn't able to complete a degree.

Amy and her husband Gary have three beautiful daughters, Kayla (20), Cheyenne (18) and Summer (16) and one terrific son, Jared (9). Her daughter Kayla also attends Union College. Gary and Amy work diligently to ensure their children get a good education.

Before coming to work at Union College, Amy was the Knox County Finance Officer for five years. When the administration changed after the election in 2004, she also made a change and started working in the Registrar's Office in July 2005 as Academic Affairs Assistant. She began taking classes the following spring semester and was very nervous because it had been several years since she was in a classroom. It has taken her seven years to complete her Psychology degree, and it has not been an easy balancing act of full-time employee, wife and mother of four, and a college student. However, she takes great pride in the fact that she achieved her goal.

Amy originally began taking classes to work toward a major in Business Administration, but after taking her first two Psychology classes in Adolescent Psychology and Forensic Psychology, she realized she really enjoyed them and changed her major. She was accepted into the combined Psychology program and also began taking classes on the graduate level. Her plan is to finish her Master's degree in Psychology. She has also earned her Chemical Dependency Counselor Certificate here at Union.

She was recently promoted to Assistant Registrar and truly enjoys her job. Amy says, "Being able to help and mentor other students is the most gratifying. I hope that some of my life experiences will aid other students in helping them to make good decisions about their future. My plan for the future is to use my education to enhance the lives of my children and the students of Union College."

"An education will always provide you with a strong foundation...Sometimes a missed opportunity does not present itself a second time, but when or if it does, by all means take advantage of it."--Amy



Jason DeWayne King became a fourth generation carpenter the summer after 8th grade, when he first began working with his father building, renovating, and reconstructing restaurants, houses, and public buildings in the Knox/Barbourville area. Saturday May 4, 2013 Jason earned his Masters degree in Psychology.

Jason worked hard as a kid. A catastrophe struck his family when his father broke his arm in the early 1990s. Jason's father couldn't do construction for about two years because of the injury. There were six in the family and money was tight but the family was close knit and hard working. Jason worked in carpentry to help his family whenever he wasn't in school -- holidays, weekends and all summer. Jason planted a garden in high school, working it in the evenings. He raised corn and beans from the three acre garden to buy his sister and himself school clothes. What money was left, he gave to his parents to use for family bills. They also sold junk out of a barn and eventually turned it into a decent furniture business. They were doing whatever it took to make ends meet, and were learning important life lessons along the way.

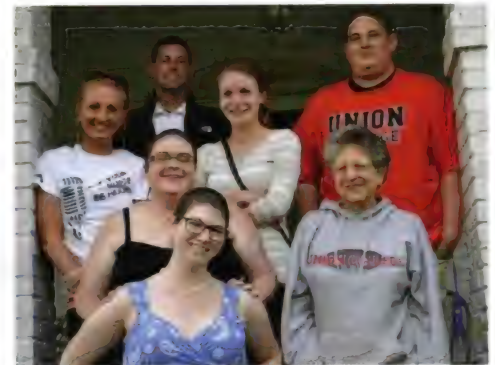
He made excellent grades in high school, and was on the academic team, chess club, and competed in world finals for Odyssey of the Mind. In 1998 Jason graduated from Knox Central, and went to summer school at ECU, starting in 1999. He went there for two years, and got married in 2001.

He returned to college in 2006, when he learned he could get both the undergraduate and graduate degrees in psychology at Union. Jason was the first in his family to earn a bachelors degree. In 2009, after 15 years in carpentry and a bachelor's in psychology in hand, Jason took a job with CRCCC as a child and family interventionist. Jason knew he wanted to major in psychology because his grandfather had PTSD from WWII, and Jason always knew he wanted to help people with mental disorders. Jason's grandfather died without ever having adequate help with his symptoms. Receiving the Masters in Psychology allows Jason to take on a position with CRCCC as a therapist. Jason wants to stay in the area working with children and families. As Jason says, "I am an Appalachian, and who better to help with the struggles we face daily. I see poverty, and strife, and suffering every day."

Jason would like to pursue a doctorate in psychology so he can do even more for his community and their mental health. Jason's wife, Leighann King, received her bachelors degree in psychology this year.

"Union's psychology department needs to further expand her clinical program. Union needs to make greater connections with local agencies. The opportunities for Appalachians are very limited and we must provide for all the people of our community." Jason King

Samantha Sayre, a Senior graduating from Union is sad to put an end to her four years spent in the Sociology department. Though she knows she will appreciate moving on in the long run, Union has become her family and she will miss it dearly. Samantha is a double major in history and Sociology, a Residence Life Assistant and one of the Co-Presidents in the Sociology Club. Sayre states, "I took Introduction to sociology my first semester here as a freshman because I had always wanted to take a sociology class before and I had the extra time block. I really loved the way the class was a discussion based class instead of a professor lecturing and us taking notes. That following summer I took Sociology of the Family as a May term class and Dr. Silber talked me into declaring a sociology minor. By Fall of 2010 she had managed to convince me to go ahead and declare Sociology as a second major. I am married to History, but I have a mad passionate love affair with Sociology. Even though I am pursuing a master's degree in History after I graduate at Union, Sociology is something I still use all of the time. Not many people are given the opportunity to understand why people do the things they do in society, but I was because of Sociology."



This year the Sociology department had many new additions to the major. One student in particular was Junior Helen Weber, from Marburg, Germany. Helen is on the Women's soccer team. When she first came she was an English major, but she took a sociology class as an undergraduate requirement and soon fell in love with it, she then decided to double major. Weber states, "Being a sociology major is great because it means you can learn about our society, build your own opinion about many things, and to be able to discuss about everything as well. Since society is mostly characterized through inequality, in my opinion, I want to work on changing this inequality when I graduate. I would like to work in an embassy or non profit organization that engages internationally because I think a lot of inequality deals internationally with exploitation."



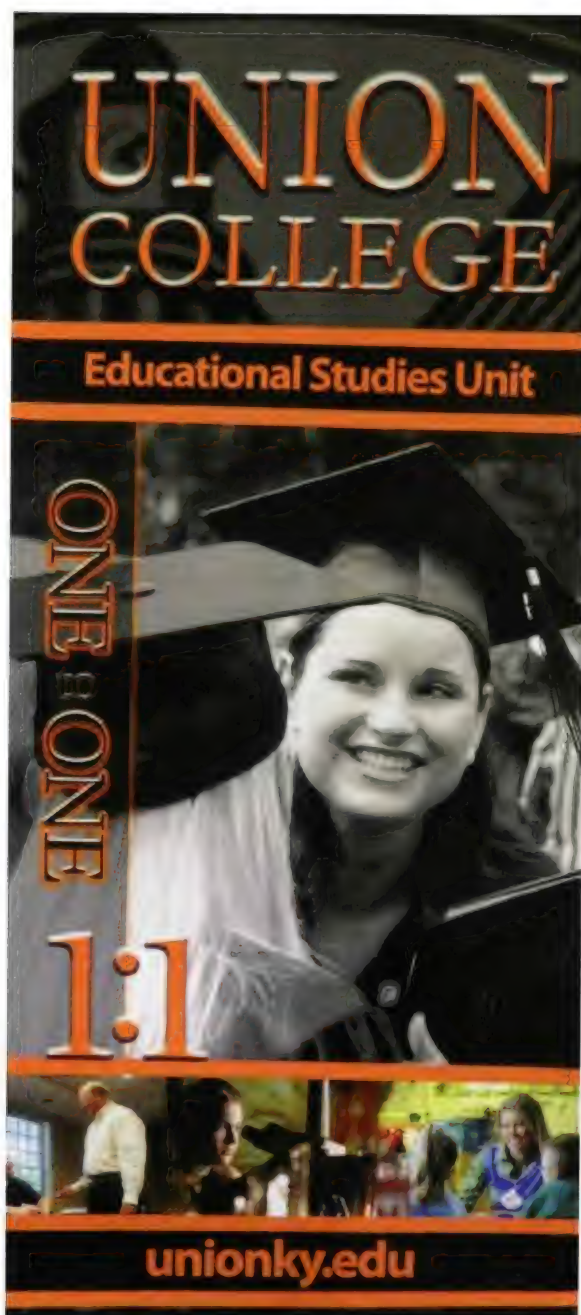
Beryllium, though sweet in minute doses, scales up very quickly to toxic. By some estimates, up to one-tenth of the human population is hypersusceptible to something called acute beryllium disease, the periodic table equivalent of a peanut allergy (192).



Education

Education is the practice of teaching children and adults new knowledge and general information, which can be used in everyday life. It is the ability to know and understand the world around us. Education gives us confidence to be who we are and helps to mold and change us into career-driven individuals. Education is a very significant major offered at Union College. It is one of the most popular majors and is expanding and gaining new students every year.

Kayla Lambert (right), a sophomore here at Union College, has chosen Secondary Education as her major. She is in the process of being admitted into the Teacher Education Program and is just beginning her required courses. Education majors are required to



spend 50 hours in the school system this semester. This requirement was recently updated to require 50 hours so college students, like Kayla, would be able to spend more time in the field of education with current teachers and students. She has already been given the wonderful opportunity to be in the local schools, interacting with the students. As Kayla observes these children and their teachers, she is able to gain new knowledge about what is being taught and how things are being taught in the local schools. Since education changes frequently, whether it involves testing changes, content modifications, or new technological advances, education majors have to be able to adapt quickly in order to provide their very best knowledge to their students.

As students like Kayla continue into the education program here at Union, they will get the opportunity to do things such as: meet current teachers, learn about new technology in the school systems, tutor struggling students, and create lesson plans. Like several other students in the education program here at Union, Kayla is only at the beginning of her journey into her Secondary Education major. As she continues through the program, she will be able to understand the importance of education and will be able to use what she has learned here at Union to her advantage. These classes and observations will mentally prepare her to be on her own in the classroom when she graduates.

Participation outside of the college classroom will give college students, like Kayla, a broader perspective about the education program. Instead of hearing her professors talk about what is going on in the schools today, Kayla will be able to see for herself exactly what the teachers in the schools are doing with their students, techniques they are using to teach their students, and most importantly, what the students are learning and what knowledge they are gaining from their teachers. Education is an important role in society and is the sole foundation of the world around us. It is the key to success; it always has been and will continue to be.

Ms. Dee Crescitelli, Director of the Educational Studies Unit Alternative Certification and Assessment said "Our collaboration with the local P-12 schools is something we really take pride in. It really helps our students here at Union to get into the classroom and see what teaching is all about."



Union College education faculty member, Ms. Mary Alice Lay takes pride in making sure the education majors at Union College are placed in a field to help fit their interest and help them progress as a educator. "After a student has decided on the field they would like to teach in, we start to focus in on that field" says Dr. Jason Reeves, Assistant Professor of Education and Dean for the Education Studies Unit. "At this point we really want to hone and polish skills to prepare the students for when they will be teaching in their own classroom."

Derrick Phipps (left) , a current Education major said, "I really enjoy the feeling I get when teaching. It makes me feel good to know that I'm helping someone else to learn and grow." Derrick, along with many other education major's at Union College will soon be teaching in classrooms of their own. Thanks to the hard working Education Department at Union College, when this day comes, they will be ready.

"Education is the most powerful weapon which you can use to change the world."
—Nelson Mandela



Bismuth is totally benign, even medicinal: it's the 'bis' in hot pink Pepto-Bismol (9)

Political Science and CRJU



Carla Jackson, left, majored in Elementary Education. In the center is dad, Charles Jackson, and right, is Gina Jackson.

Gina Jackson is from Corbin. And although her uncle is Jerry Jackson, Vice President for Enrollment at Union, Gina took a few years off after graduating from high school to work. She wasn't sure about college. But her Aunt Beth, who loved Union, and her uncle helped her with the decision to go to college. Before her aunt passed away, during Gina's freshman year, Gina promised her Aunt Beth that she would finish college and not quit. There were many times she wanted to give up but didn't because she didn't want to break that promise and didn't want to let down her family. She and her sister started at Union in August 2008 and both graduated May 2013, honoring the promise to their aunt.

Gina was extremely nervous when she started college classes and wasn't sure what to expect but ended up really enjoying the class work and activities. It really helped that Union was close to home, the faculty/staff were extremely nice, and the campus was beautiful. Gina says, "Union will always be like a second home to me. A lot of memories were made here." She finds criminal justice fascinating and wants to work either in child welfare or within the drug-court/pre-trial service.

"For future students attending Union, I would encourage them to take part in the college experience and attend all campus activities. Those little moments make up wonderful memories!"--Gina

Charles Hunnicutt is a History and Political Science major from Bradenton, Florida. He comes from a single family home where his mom alone raised him since he was six years old. In 2007 he started taking classes at State College of Florida, a community college in his hometown. He received his A.A. from there in 2010 and then transferred to Union to get his Bachelors. This May 2013 he received his Bachelors. During the graduation ceremony he also got engaged to his sweetheart, Erin Karlsgodt.

He has always wanted to be a high school teacher and a football coach. While at Union his dreams broadened and now he wants to be the Secretary of Education.

His first impression of Union was that the setting was amazing. He does not come from a small town but experiences throughout his life have taught him to do what you can with what you have. He grew to enjoy the small town environment and very much appreciates the one to one atmosphere with professors at Union.

"I would tell students at Union to not give up. It all works out in the end and it's going to be worth it." --Charles



Social Work

My name is Leigha Marie Nicole McFerron, but I go by Nicole. I am from Rockcastle County, Kentucky, where I graduated from Rockcastle County High School. When I graduated high school and enrolled at Union College in the Fall of 2010 I declared my major as Business and Psychology. However, after taking SWRK 120 (the basic human resource class), PSYH 100, and Intro to Sociology, I realized that I had no interest in business. Through doing service learning hours at different agencies I realized I wanted to do something to help others meet their basic needs.

Before I came to Union College, I was working a part time job at our local Home Health Agency. The summer of my Junior year I was hired as a part time service provider to help with Comp Care's Summer Program. This job continued during that following school year at various schools in Barbourville. Therefore, I am currently a full time college student at Union College, doing work study in Union's library, and a part time employee through Cumberland River Comprehensive Care Center. This fall I will be a Senior, and working on my last year as a Social Work student.

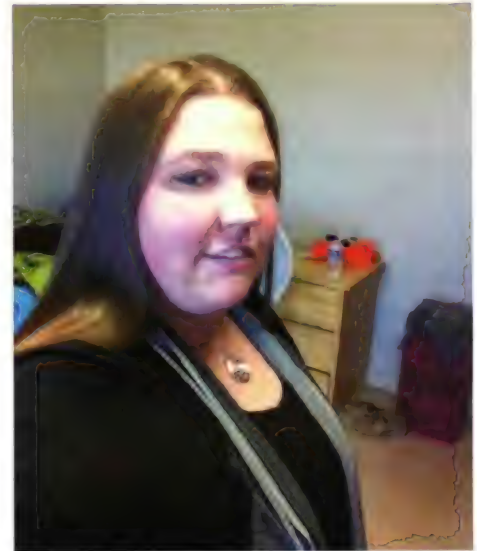
I live on campus throughout the school year and go back to Rockcastle County to live with my family during the summer. My family consists of my mom (Branda McFerron), my dad (David McFerron), and my brother (Brandon McFerron).

I'm currently working with kids through my job at Comp Care and want to improve my work with kids. I have realized through my various social work classes that my target population is children. I want to work with them and ensure their needs are being met. I also want to work with them to help build resiliency, so that their future is possibly more bright than it could've been without help. If I had to pick one thing I truly love about my major it would have to be the relationships/networks you build with others, along with being able to help others in the areas they need and want help in.

My first impression of Union was... wow, this place feels like home and I have never been here before. It is a beautiful campus, it's small and cozy. The class sizes are small and I feel more comfortable than I did in high school.

The wisdom I would impart on others is to take full advantage of opportunities you receive in college. Put yourself out there and take chances. Always strive to do your best, make as many friends as you can, and have fun. You're only in college once. With that being said I'm not encouraging people to go out and party, get into trouble, or take risks that could mess up their educational career.

Challenges I have encountered while in college would be putting myself out there. I hardly ever stepped out of my comfort zone until recently. My main focus was placed on my academics and work. However, I have learned to be involved in more things. If I could go back I would have been more involved earlier on in college, instead of waiting until the last 2 years.



Around 1825 chemists extracted the metal aluminum. Because of its luster, minerologists classified it as a precious metal worth hundreds of dollars an ounce. Despite being the most common metal in the earth's crust--around 8 percent by weight--hundreds of millions of times more common than gold--aluminum never appears in pure, mother lode Al form. It's always bonded to something, usually oxygen (234).



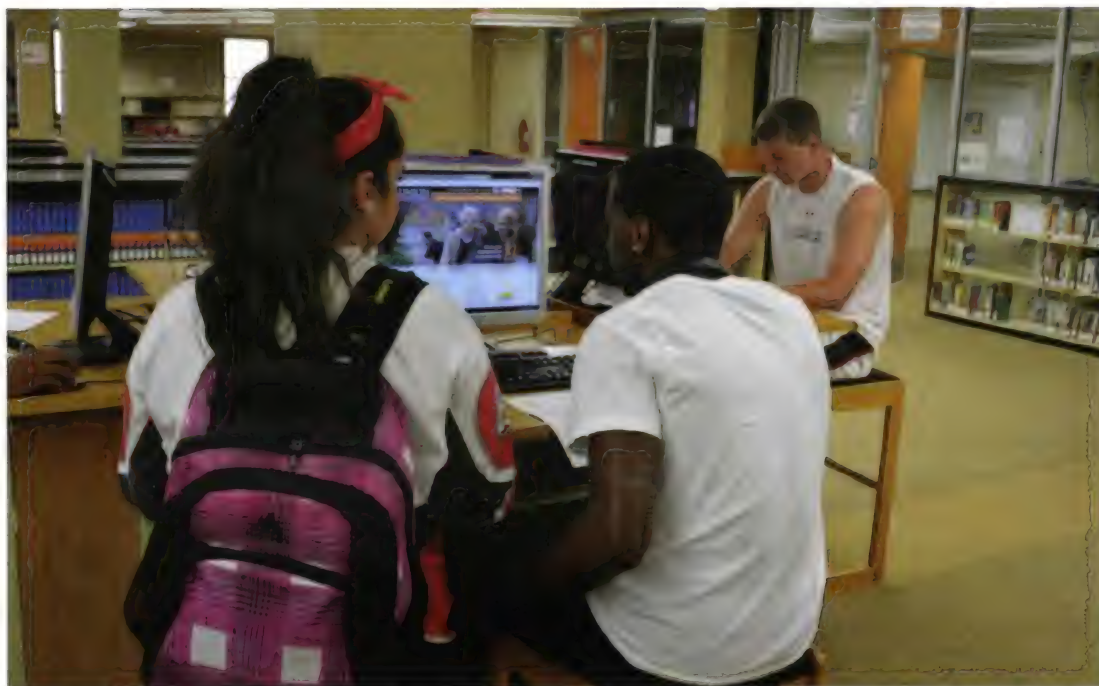
Library

Starting each morning with a fresh cup of his hand roasted beans coffee, Matt Egging is a first year Circulation assistant at the Memorial Library. Matt loves to read books and is a former high school English teacher. Matt lives twenty minutes away from the college and has recently had a daughter who is now three months old. Working in the library gives Matt the flexible hours he needs to be able to work and take care of his daughter. When asked what he liked most about working in the library Matt says: "I love interacting with the students such as helping a student find a book for an assignments or research, showing students how to do good research on the

computer and even looking over student's rough draft and finals papers and helping them make corrections before submitting the assignment. Overall, I just love helping people."

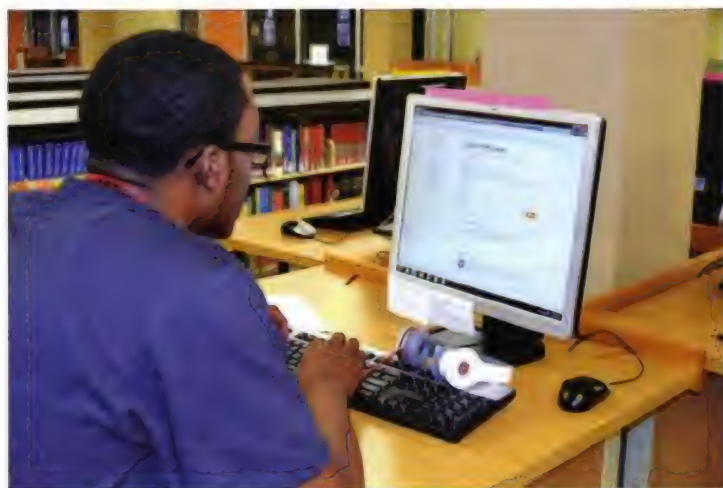
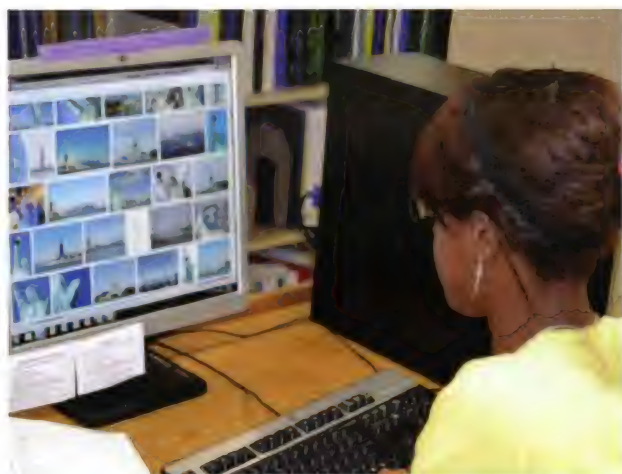
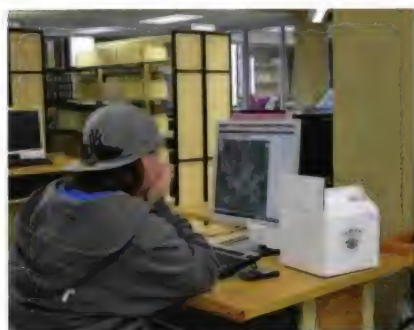
Matt is always sitting behind the front desk at the entrance of Memorial Library with his cup of coffee and a big smile on his face greeting people as they enter and asking how he can be of an assistant to them. Matt will go out of his way to help anyone with an assignment. The other people who work in the library are just like Matt: people who make going to the library enjoyable and helpful.



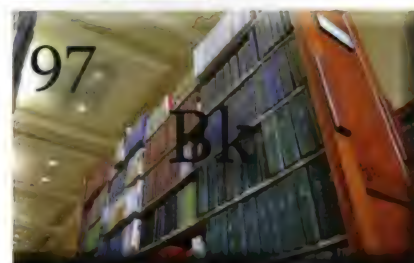


"Working in the library seems like it would just be the same thing every day, but it always surprises you the questions you get asked and overhear from students. "Do you guys have books here" is a fan favorite. Another funny one we have overheard is "Can I keep this or do I bring it back?" Those silly questions are far and in between though, and not everyone is as inexperienced when it comes to the library. It is always rewarding to help someone find a book they have been looking for or one they really want to read. It's pretty rewarding to be able to search for just a keyword in the title or the authors name and be able to find a book they have searched everywhere for. Another one of the coolest parts about working there is getting to see all the new books before they hit the shelves. When we get books in it takes a few days to process them and get them ready to be checked out and we have the opportunity to see them as soon as they come in, which is pretty neat. Overall its a pretty cool job!"

Samantha Caldwell



A Berkeley team of scientists discovered Berkelium and Californium in 1949. The scientists advocated for calling the element Berkelium and making its chemical symbol Bm, because the element had been such a 'stinker' to discover. Unfortunately, they were overruled, and the symbol for Berkelium became Bk (119).



Honors Awards

Dr. Mahlon A. Miller President Emeritus Award: Aaron Scott McCollum
 Governor James D. Black Senior Award: Aaron Scott McCollum
 Dr. Cecil H. Wilson Junior Award: Andrew Lewis Long
 John Henry Wilson Sophomore Award: Kendra Rachelle Gray
 Arthur E. Spurlock Business Award: Celena Darice Partin
 Dr. L. A. Geiss Senior Award: Richard Thomas Mathes
 Dr. L. A. Geiss Junior Award: Andrew Lewis Long
 Dr. L. A. Geiss Computer Award: Austin K. Barber
 Joe C. Hacker Computer Award: Carl James Smith
 Rena Milliken Award: Aaron Scott McCollum
 H. B. Jones Business Enterprise Award: Holly B. Wilson
 Evans Warriner and Company CPA Scholarship Award: Amanda Sue Disney
 Stephen C. Skidmore Memorial Award "Excellence in Economics": Andrew Lewis Long
 Beverly P. and Mossie B. Wilson Memorial Award: Cassy Christian Kost
 William Faulkner Rushton Writing Award - Poetry: Robin Marie Garrison
 William Faulkner Rushton Writing Award - Short Story: Robin Marie Garrison
 The Hobart Jarvis Sr. Creative Writing Award: Elisabeth Marie Weaver
 The Literature Award: Cassy Christian Kost
 Iota Sigma Nu Freshman Award: Laurel Celeste Everett
 Iota Sigma Nu Freshman Award: Lydia Marie Nash
 Iota Sigma Nu Sophomore Award: Leigh-Ella Michelle Williams
 Dr. Paul S. Moore Wellness, Human Performance
 and Recreation Management Faculty Award: Aaron Scott McCollum
 Steve Jones Memorial Award: Brittany Marie Zins





Dr. Albert D. Graham Jr. Social Studies Award: Jennifer Hope Burke
 Dr. Jean Letch Education Award: Nicole Lynn Jeck
 The Jones Foundation Award in Education: Morgan M. Baker
 Yetta Frank and Billie Lynch Non-traditional Student Education Award: Jolena Angeline Ramey
 Mathematics Award: Kevin Robert Williamson
 Dr. Paul Muncy Memorial Award: Dayna Renae Pickard
 Theodore R. Davies M.D. Senior Biology Award: Dayna Renae Pickard
 Wimmer Chemistry Award: Leigh-Ella Michelle Williams
 Outstanding Psychology Major Award: Donna Marie Fowler
 Excellence in Research Award: Susan Denise Poff
 Dr. Erwin S. Bradley History Award: Richard Thomas Mathes
 H.H. Owens History Award: Samantha Sayre
 Laws and Esten Parks Award: James Justin Hyde
 Rev. Charles Hansel Annual Award in Religion & Philosophy: Charles Edward Hunnicutt II
 Rev. Charles Hansel Annual Award in Religion & Philosophy: James Justin Hyde
 Blackwell Political Science Award: Charles Edward Hunnicutt II
 Judge W. W. Tinsley Family Memorial Award: Brittany Marie Zins
 Outstanding Sociology Major Award: Samantha Sayre
 Outstanding Student in Criminal Justice: Jacob Michael Mills
 Sampson Political Science Award: Byron Alexander McIntosh
 SGA Study Abroad Internship/Scholarship: Alexandra Layne Estes
 SGA Study Abroad Internship/Scholarship: Elisabeth Marie Weaver
 SGA Distinguished Professor Award: Paula Jean Allen
 SGA Distinguished Professor Award: John Craft Taylor



Smoke detectors run on the radioactive element Americium. Americium is a reliable source of alpha particles, which can be channeled into an electric current inside detectors. Smoke absorbs the alpha particles, which disrupts the current and sets off the smoke alarm (166).



Baccalaureate

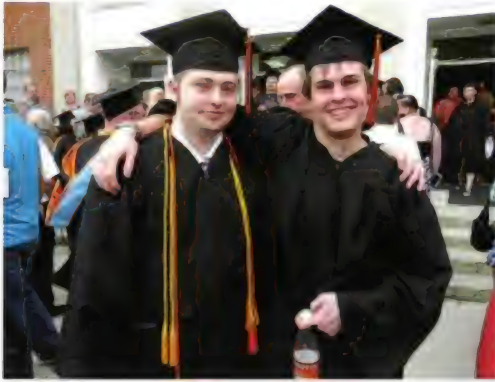




After amassing a microscopic sample of element ninety-three, neptunium, Seaborg and a colleague sifted through the radioactive sample by dissolving away the excess neptunium, until only a small bit of chemical remained. They proved the remaining atoms had to be chemical ninety-four by ripping electron after electron off with a powerful chemical until the atoms held a higher electric charge than any element before. Under the belief that this was the laet possible element they named it after the furthest known planet, Pluto (117).



Graduation

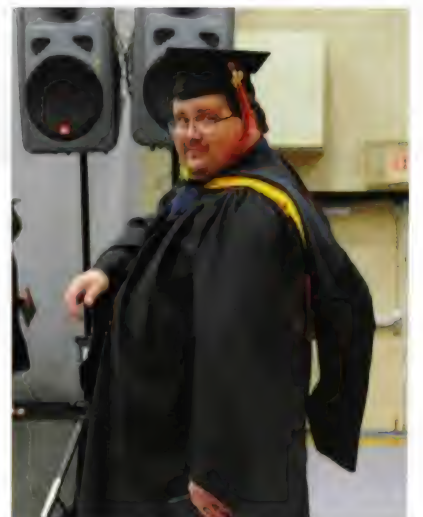


It's graduation day. Here we go.
--Sonny Whitson, FB



Its official I am a Union College graduate. I know my mom and dad are looking down at me with big proud smiles. Thank you to my family and my amazing wife Robin Kinman for being there for me. I also want to wish all my friends a congrats and best wishes on where life takes them.

--Eric Kinman, FB





I want to thank all of my friends and family for supporting me through these crazy four years. Both the ones who could come to graduation today and those who couldn't, I am truly humbled and blessed with such amazing people in my life. I love you all more than you could ever know!
 --Samantha Caldwell, FB



Congrats guys! We did it!
 --Cassy Kost, FB



Almost all life forms use metallic elements in trace amounts to create, store, or shuttle energetic molecules around inside them. Animals primarily use the iron in hemoglobin, but the earliest and most successful forms of life, especially blue-green algae, used magnesium. Specifically, chlorophyll (probably the most important organic chemical on earth) is crowned with magnesium ions at its center. Magnesium in animals helps DNA function properly (329).



ELEMENT 4: Athletics

4
Ath

Explosive under pressure.
Determined to win. Stubborn to
achieve balance and harmony.
Protons eject neutrons in the
presence of electrons.

<div>1</div> <div>H</div> <div>Hydrogen</div> <div>1.0079</div>		<div>3</div> <div>Li</div> <div>Lithium</div> <div>6.941</div>		<div>4</div> <div>Be</div> <div>Beryllium</div> <div>9.0122</div>		<div>11</div> <div>Na</div> <div>Sodium</div> <div>22.9897</div>		<div>12</div> <div>Mg</div> <div>Magnesium</div> <div>24.305</div>									
<div>19</div> <div>K</div> <div>Potassium</div> <div>39.098</div>		<div>20</div> <div>Ca</div> <div>Calcium</div> <div>40.078</div>		<div>21</div> <div>Sc</div> <div>Scandium</div> <div>44.9559</div>		<div>22</div> <div>Ti</div> <div>Titanium</div> <div>47.867</div>		<div>23</div> <div>V</div> <div>Vanadium</div> <div>50.9415</div>		<div>24</div> <div>Cr</div> <div>Chromium</div> <div>51.9961</div>		<div>25</div> <div>Mn</div> <div>Manganese</div> <div>54.938</div>		<div>26</div> <div>Fe</div> <div>Iron</div> <div>55.845</div>		<div>27</div> <div>Co</div> <div>Cobalt</div> <div>58.9332</div>	
<div>37</div> <div>Rb</div> <div>Rubidium</div> <div>85.4678</div>		<div>38</div> <div>Sr</div> <div>Strontium</div> <div>87.62</div>		<div>39</div> <div>Y</div> <div>Yttrium</div> <div>88.9059</div>		<div>40</div> <div>Zr</div> <div>Zirconium</div> <div>91.224</div>		<div>41</div> <div>Nb</div> <div>Niobium</div> <div>92.9064</div>		<div>42</div> <div>Mo</div> <div>Molybdenum</div> <div>95.94</div>		<div>43</div> <div>Tc</div> <div>Technetium</div> <div>(98)</div>		<div>44</div> <div>Ru</div> <div>Ruthenium</div> <div>101.07</div>		<div>45</div> <div>Rh</div> <div>Rhodium</div> <div>102.9055</div>	
<div>55</div> <div>Cs</div> <div>Cesium</div> <div>132.9055</div>		<div>56</div> <div>Ba</div> <div>Barium</div> <div>137.327</div>		<div>57</div> <div>La</div> <div>Lanthanum</div> <div>138.9055</div>		<div>72</div> <div>Hf</div> <div>Hafnium</div> <div>178.49</div>		<div>73</div> <div>Ta</div> <div>Tantalum</div> <div>180.9479</div>		<div>74</div> <div>W</div> <div>Tungsten</div> <div>183.84</div>		<div>75</div> <div>Re</div> <div>Rhenium</div> <div>186.207</div>		<div>76</div> <div>Os</div> <div>Osmium</div> <div>190.23</div>		<div>77</div> <div>Ir</div> <div>Iridium</div> <div>192.217</div>	
<div>87</div> <div>Fr</div> <div>Francium</div> <div>(223)</div>		<div>88</div> <div>Ra</div> <div>Radium</div> <div>(226)</div>		<div>89</div> <div>Ac</div> <div>Actinium</div> <div>227.03</div>		<div>104</div> <div>Rf</div> <div>Rutherfordium</div> <div>(261)</div>		<div>105</div> <div>Db</div> <div>Dubnium</div> <div>(262)</div>		<div>106</div> <div>Sg</div> <div>Seaborgium</div> <div>(266)</div>		<div>107</div> <div>Bh</div> <div>Bohrium</div> <div>(264)</div>		<div>108</div> <div>Hs</div> <div>Hassium</div> <div>(277)</div>		<div>109</div> <div>Mt</div> <div>Meitnerium</div> <div>(268)</div>	

Ath

Explosive under pressure.
Determined to win. Stubborn to achieve balance and harmony.
Protons eject neutrons in the presence of electrons.

58 Ce Cerium 140.116	59 Pr Praseodymium 140.9077	60 Nd Neodymium 144.24	61 Pm Promethium (145)	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25
90 Th Thorium 232.0381	91 Pa Protactinium 231.0359	92 U Uranium 238.0289	93 Np Neptunium (237)	94 Pu Plutonium (244)	95 Am Americium (243)	96 Cm Curium (247)

										2 He Helium 4.0026					
										5 B Boron 10.881	6 C Carbon 12.0107	7 N Nitrogen 14.0067	8 O Oxygen 15.9994	9 F Fluorine 18.9984	10 Ne Neon 20.1797
										13 Al Aluminum 26.9815	14 Si Silicon 28.0855	15 P Phosphorus 30.9738	16 S Sulfur 32.065	17 Cl Chlorine 35.453	18 Ar Argon 39.948
28 Ni Nickel 58.6934	29 Cu Copper 63.546	30 Zn Zinc 65.409	31 Ga Gallium 69.723	32 Ge Germanium 72.64	33 As Arsenic 74.9216	34 Se Selenium 78.96	35 Br Bromine 79.904	36 Kr Krypton 83.798							
46 Pd Palladium 106.42	47 Ag Silver 107.8682	48 Cd Cadmium 112.411	49 In Indium 114.818	50 Sn Tin 118.71	51 Sb Antimony 121.76	52 Te Tellurium 127.6	53 I Iodine 126.9045	54 Xe Xenon 131.293							
78 Pt Platinum 195.078	79 Au Gold 196.9665	80 Hg Mercury 200.59	81 Tl Thallium 204.3833	82 Pb Lead 207.2	83 Bi Bismuth 208.9804	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)							
110 Ds Darmstadtium (271)	111 Rg Roentgenium (272)	112 Uub Ununbium (277)													

65 Tb Terbium 158.9253	66 Dy Dysprosium 162.5	67 Ho Holmium 164.9303	68 Er Erbium 167.259	69 Tm Thulium 168.9342	70 Yb Ytterbium 173.04	71 Lu Lutetium 174.967
97 Bk Berkelium (247)	98 Cf Californium (251)	99 Es Einsteinium (252)	100 Fm Fermium (257)	101 Md Mendelevium (258)	102 No Nobelium (259)	103 Lr Lawrencium (262)

Men's soccer



Jordan Johnson and Johnny Watson congratulate each other.



Team huddle



Back row: Assistant coach Jonathon Shaw, Dino, Houston Stagner, Joe Woodley, Nick Holt, Brad Seiter, Ashton Johnson, Alfie Caruso, Jordan Johnson, Joe Butcher, Johnny Watson, Cody Johnson, Micheal Moore, Dawson Marcum, Juan Gallegos, Head coach Tyler Brock, Trainer Zach Allen.

Front row: Trey Upton, Nick Mettert, Hugo Sanchez, Tj Speckman, Jamie Cozens, Brian Chapman, Coy Taylor, Madison Justice.



Tom Bayliss on the defense.



Joe winds up to cross the ball.

In the fall of 2012, the Union College men's soccer team had a season that can be best described as rewarding. The team as a whole and as individuals overcame many obstacles and endured different struggles that in the end resulted in a successful season. Jamie Cozens, Johnny Watson, and team captain Madison Justice share their thoughts and feelings on phenomenal plays, team growth, leadership, and life in a foreign country.

Junior Jamie Cozens describes his favorite moment on the turf when he states, "The one outstanding thing that happened last year in my opinion was the Homecoming game vs. Berea. Our performance on that day was probably the best soccer we played all season. We controlled the game from start to finish. It was also lovely to play in front of family, friends and alumni who all contributed to a great crowd to play in front of." Players and spectators alike agree the homecoming game was one they will never forget.

After losing half of their men, so many new freshmen were recruited to rebuild the team. Cozens' says, "The thing we struggled with the most as a team was simply the experience that we had. We had a lot of guys that were freshman and it is always hard to make the jump from high school to college. The boys came good and got more and more comfortable as the season went on and that allowed us to start picking up wins more frequently."

Team Captain, sophomore Madison Justice, discusses the pros and cons of being a leader. He exclaims, "I was very excited and honored! Especially as a sophomore I felt very proud to be picked. The best part would probably be having people look up to you and being able to get your point across easily and also have people listen and understand where you're coming from. The worst part is having to stay on your peers sometimes to keep them motivated and on task. It's like you have to play a double role of friend and leader."

Sophomore Johnny Watson explains what it was like to leave Scotland to become a college athlete in the United States. He claims, "I like being an athlete living so far from home because I enjoy my independence. I enjoy living far from home and experiencing a different culture. My teammates help me from getting homesick, especially the other internationals from Great Britain like Jamie.



Jamie Cozens looks for an open player.

We can relate to each other and being able to talk about home with each other helps a lot." Although there are several team members who aren't so far from home, international players make up the majority of this team.

Adjusting to a new team, accepting more responsibilities, and moving to a new country are just a few of the challenges the Union College men's soccer team faced in the 2012 season. Over the course of four months the men matured and grew as a team, ultimately strengthening the bond that keeps together. They finished 7-9-2 overall and 2-5-1 in conference, those standings alone prove just how rewarding the season was.

Raw sodium or potassium, if ingested, would explode upon contact with every cell inside you, since it reacts with water. But potassium and sodium are so reactive they never appear in their pure, dangerous form in nature (156).



Women's Soccer



Back row: Assistant coach Jessica Brandner, Head coach Camila Mendes, Aline Dalmedico, Payten Walters, Danielle Gilbert, Helen Weber, Nichole Grindler, Kaitie Crawford, Sofie Jorgenson, Jennifer Skirl, Sirley Lopez, Jessica Perkins, Trainer Lindsey Ligon, Assistant coach Patricia Nardy.

Front row: Krista Tuta, Kayse Cornett, Stephanie Hurwitz, Charity Wilms, Angelica Dones, Chelsi Comberger, Stephanie Burton, Kayla Langen, Jessica Frisby, Haley Fox, Morgan Hiles, Casey Camargo.



Helen Weber and Jessica Frisby celebrate a goal.



Danielle Gilbert



Stephanie Burton



Aline Dalmedico

Chemistry on the field is vital and is the reason why these players were so successful. During practices, workouts, and games this team put their hearts into all they did in order to make their season one they would never forget.

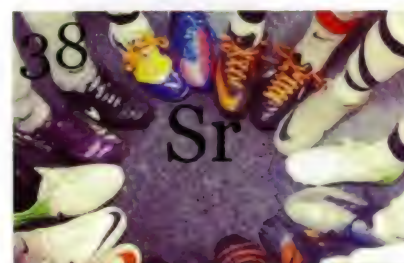
It takes an entire team to get a win, however there were a few plays that stood out this past season. The first one was an outstanding goal scored by sophomore Helen Weber in the game against Montreat. The Union girls were fired up for their match against their undefeated rival and refused to go home without a win. Determined to make that happen, Weber sprinted up the field to receive a through ball from Sofie Jorgenson and placed it perfectly inside the net. Another highlight moment was when sophomore Jessica Frisby made the game winning goal in the semi-finals game against Reinhardt. Just off the bench, Frisby ran up the right side to receive a pass from Helen Weber and shot the ball just over the keepers head. It's always been said the best offense is a good defense and with a strong back line and a skilled keeper in the goal that is exactly what the Union girls had. Senior keeper Stephanie Burton ended her final season with seven shutouts and over ninety saves, while Casey Camargo, Danielle Gilbert, Kayse Cornett, and Morgan Hiles formed a powerhouse defense against every opponent.

Throughout the season, the women's soccer team had a lot of ups and downs such as wins against rivals and sustaining injuries to several of its players including a concussion to sophomore Kayla Langen and a knee injury to sophomore captain Kayse Cornett. In the end, under the leadership of seniors Stephanie Burton, Casey Camargo, Jennifer Skirl, and Nichole Grindler all of the girls put in the hard work and dedication required to have a winning season.

Seniors



The discovery and study of strontium was the first flicker that something like the periodic table existed. Discovered in London in 1790 not far from Shakespeare's old Globe theatre, when studying its characteristics, its weight fell exactly between the weights of calcium and barium and it behaved like barium and calcium in chemical reactions. Strontium was somehow a blend of two elements, one lighter and one heavier (242).



Volleyball



First Row L-R: C. Heaton, Leshia Hardin, K. Gregory, K. Brunner, F. Welch, T. Atkinson, K. Simpson. Second Row: T. Burdzilauskas, K. Ramos, T. Kline, S. Manning, C. Gray, C. Merritt, H. Fields, L. Ellis, P. Moore, M. Sammons. Third Row: K. Yasak, C. Amshaft, G. Kelley, C. Neumann, H. Hopkins, C. Hicks, B. Porter, J. Engle, Ann Worley, Athletic Trainer.





Junior Caity Merritt has been in a rush and a standstill in her Volleyball career at Union. Also a Student Ambassador, she said, "I'm always rushing to practice after class!" But sometimes there is a wait. Like when things came to a grinding halt when the team had to wait five hours for a bus. Things took a turn for the worse later on when the bus hit a car with the team still inside. "Both situations were extremely comical for us as a team at the time and probably always will be," Caity laughed.

Not including the hit car, Caity ranked #2 in hitting percentage in the AAC.

Her biggest accomplishment was when she became the first Volleyball player in Union history to receive the Daktronics-NAIA Scholar Athletes award. "I work extremely hard for my success so it's nice to have both my academics and athletics recognized at the same time" she explained. Caity was also named to the All-AAC First Team and the CoSIDA All-District Academic Team.

Caity's positive outlook shines through to the future where she wants to keep an open mind and, "love what I am doing at any given moment!"



Ounce for ounce, the most valuable element, among the elements you can actually buy, is rhodium. That's why, to trump a mere platinum record, the Guinness Book of Records gave former Beatle Paul McCartney a disk made of rhodium in 1979 to celebrate his becoming the bestselling musician of all time.



Football



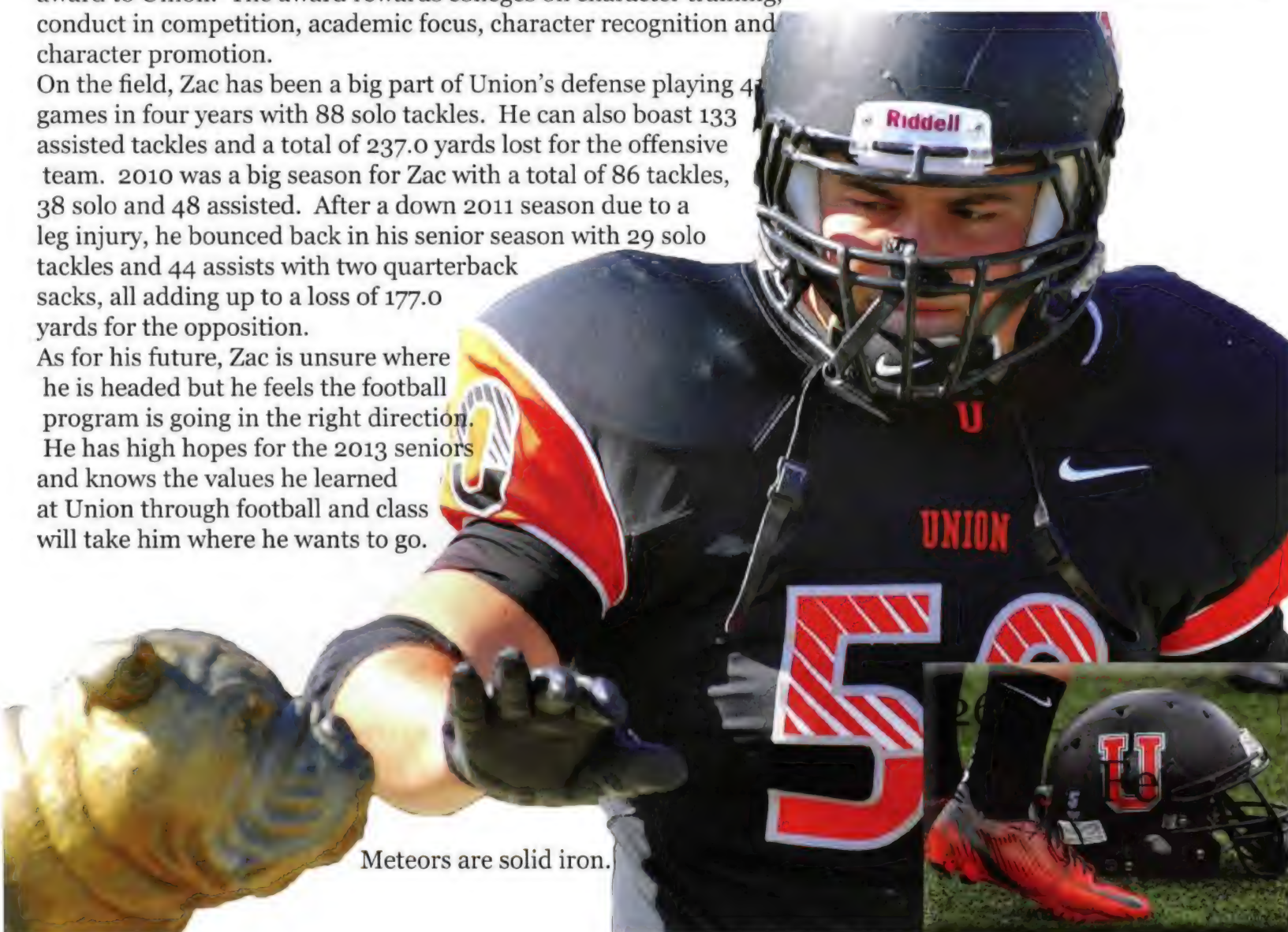


Juggling success in the class and on the field hasn't been easy for senior linebacker Zac Eagler. Also a member of the Honors Community, Zac said, "My biggest challenge was learning how to manage my time between school and football; having so much to do makes you use your time efficiently." Even with his time crunched, Zac is proud to have served as SGA president in the 2010-2011 season. The same year his work with the Common Partners' recycling program helped bring the NAIA's "Champions of Character" award to Union. The award rewards colleges on character training, conduct in competition, academic focus, character recognition and character promotion.

On the field, Zac has been a big part of Union's defense playing 47 games in four years with 88 solo tackles. He can also boast 133 assisted tackles and a total of 237.0 yards lost for the offensive team. 2010 was a big season for Zac with a total of 86 tackles, 38 solo and 48 assisted. After a down 2011 season due to a leg injury, he bounced back in his senior season with 29 solo tackles and 44 assists with two quarterback sacks, all adding up to a loss of 177.0 yards for the opposition.

As for his future, Zac is unsure where he is headed but he feels the football program is going in the right direction. He has high hopes for the 2013 seniors and knows the values he learned at Union through football and class will take him where he wants to go.

Meteors are solid iron.



Track & Cross Country



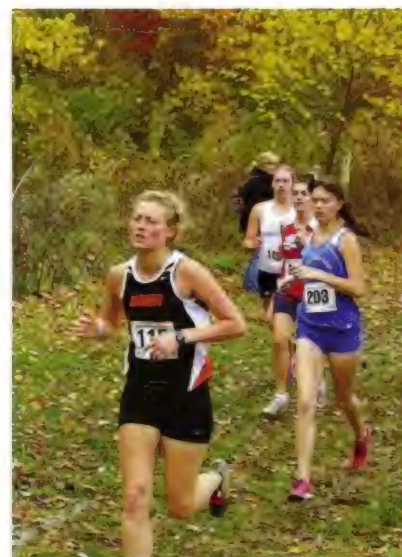
Cross Country

Back row: Assistant Coach Kevin Croston, Bradley Fieldhouse, Danny Trauth, Andrew Johnston, Head Coach Jamie Ness.

Front row: Darby Martin, Shelby Harp, Danielle Jasiewicz, Cassie Kost, Renata Volf.



Shelby Harp, Cassie Kost, and Danielle Jasiewicz.



Cassie Kost running XC.



Track and Field

Back row: Tommy Hayes, Alexandria Grant, Danny Trauth, Eric Kinman, William White, Arthur Derico, Matthew Francis, Josh Cox, Abigail Tigie, Andrew Johnston, Christa Hicks.

Front Row: Head Coach Jamie Ness, Danielle Jasiewicz, Kayse Cornett, Feiarra Foster, Dalton Whitney.



Brad Fieldhouse hurdling.

Both the Union College Cross Country and Track teams push themselves to the limit every day in hopes that they will be better than they were the day before. The two sports are often grouped together because they both compete as a team as well as individually in addition to the amount of endurance they both require. Senior cross country runner Cassie Kost and sophomore cross country and track team member Danielle Jasiewicz explain the differences between the two sports along with their passion for them.

Cassie shares, "Running may be a difficult sport, but I've been doing it since middle school and this was my tenth year running cross country competitively! It's like an addiction. It's hard, but I love being able to get outside, go on adventures, and run trails until I can't run anymore! I have a passion for running that will never go away." The two teams shared the same coaches and with their help everyone was ensured to improve with every practice.

She goes on to describe what all she accomplished with just the help of one good coach, "I really enjoyed having Renata Volf as my coach for my senior season. She helped me break through a barrier I've been waiting to cross since freshman year. She helped me to push past a certain level of pain and be competitive. I would say that my senior season was not so much successful as it was satisfying."

As a member of both teams, Danielle has put in the work and reaped the rewards that both track and cross country have to offer. As much as she loves competing with the two teams, she does prefer one over the other. She states, "I love all the friends I made on both teams but track is my favorite because it gets me in better shape due to all of the weightlifting involved in the workouts."

Seniors



Cassie Kost



Frantzy Sejour



Bradley Fieldhouse



Christa Hicks



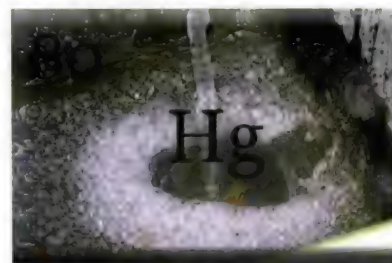
Andrew Johnston



Fierra Foster



Eric Kinman



Only two elements, mercury and bromine are liquids at room temperature. (13)

Cycling



Coach Peter Haile tells us "Hosting a race for Union College was one of the most fulfilling tasks I've had here in Barbourville. Hosting a race really gives legitimacy to a program. The dual slalom track was our big challenge, as we had to move an enormous amount of dirt. Hosting a conference race requires four different tracks a cross country course, a short track course, a downhill course, and a dual slalom course. Coming in, Chuck Coffey had left with an excellent cross country loop and the initial event requisition paperwork completed. So four months prior to the race I had a lot to do! With the help of my team, Dave Nevels, and Jim Mays of Mays Limestone we completed our task in the nick of time.

Building the track with the team brought the team together enormously. Having a top notch track really helps me to teach the fundamentals of bike handling as well. I believe showing the riders I invested myself into the success of the team with such a tangible project really helped me gain the respect of the team, especially being so close in age to my riders.



Ray Dangelmaier is competing in a Cyclo-Cross race. Union College's cycling program implemented a new discipline of cycling this year. They have expanded to now include mountain biking and Cyclo-Cross.

Cycling is such a psychological battle. This respect and confidence is of extreme importance in cycling. Overall the new track has been brilliant.

The Union College cycling team just missed out on a second-straight National Championship, registering a second place team finish at the 2012 NCCA Division II Nationals in Angel Fire, N.M.

As a team, the Bulldogs (who finished with 588 total points) were edged by Brevard (N.C.), who finished with 629 total points. The second place finish was the third for the Bulldogs in the last four seasons.

On the individual end, however, Union came up golden, as senior Wesley Lamberson was victorious in the Men's Division II Individual Omnium, capturing UC's ninth individual National Title. It was the first for a men's cyclist at UC since Zach Winn won the honors in 2008 and 2009.





Pictured (L to R): Coach Peter Haile, Ruthanna Hart, Kara Uhl, Wesley Lamberson, Brittany Boswell, Kassie Patterson, Mary Martinez, Mike Baird, Ray Dangelmaier, Vitoria Oliviera, Asst. Coach Elisa Otter, Steven Bingham



Nebuchadnezzar, the king who built the Hanging Gardens of Babylon in the sixth century BC, used a noxious antimony-lead mix to paint his palace walls yellow. He soon went mad, sleeping outdoors in fields and eating grass like an ox.



Swimming



Back row: Luis Ambrosio, Rafael Bertholo, Louis Glavinos Jr., Jeffrey Snider, Aaron Bean, Vinicius Rossi, Yan Rocha, Assistant coach Sam Mashburn, Head coach Rafael Forti, Renata Cabral, Kayla Yokely, Cameron Brewer, Tanya Eustrom, Lexus Thompson, Travis Strachan, Martino Cervera, Trainer Dan.

The men's and women's swimming teams at Union College have certainly prospered over the last several years. With big titles under their belt such as All-Americans, Conference Championships, and NAIA Scholar Athletes, there is no doubt the teams will continue to thrive far into the future. Senior member of the women's swimming team, Tanya Eustrom, reflects back on her experience as a swimmer at Union, My favorite moment from this past swim season was at the

invitational in December. "It was the last meet we had before Christmas break and everyone was doing fantastic, dropping a lot of time and making national cuts. The girls ended up 2nd overall with only having 4 girls and the guys finished 1st which was fantastic." According to Tanya all of the seemingly endless hours of training have really paid off.

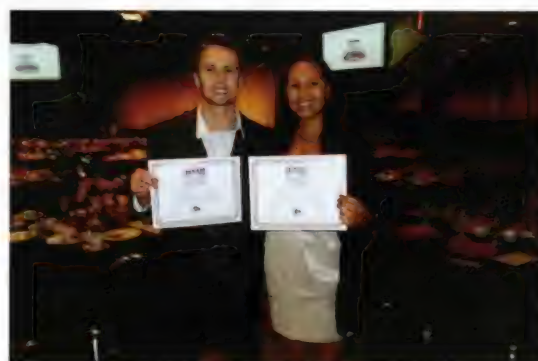
She says, "The most rewarding thing about swimming for me is when you have just swam your heart out,

raced into the touch pad, and you turn around to look at the score board and you have just out touched the swimmer next to you and also make a best time."

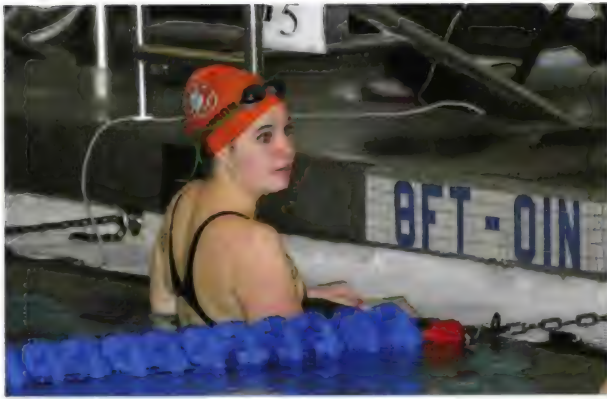
A native of Burlington, Ky., Tanya Eustrom is the only senior for the women's swimming team. For their 2012-2013 season, Tanya helped lead her team to success with her impressive freestyle.



President Hawkins with Coach Forti.



Tanya Eustrom with her award.



Lexus Thompson in the pool.



Louis Glavinios Jr.



Cabral with President Hawkins and Coach Forti.



Vincinius Rossi

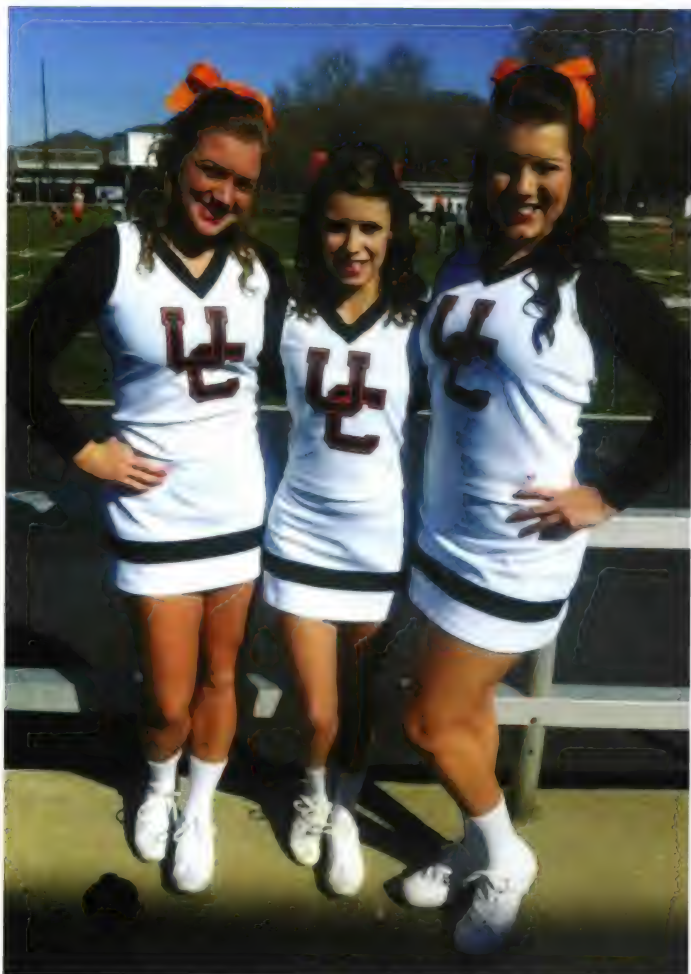


Head coach Rafael Forti, Luis Ambrosio, Jeffrey Snider, Travis Strachan, Louis Glavinios Jr., Assistant Coach Sam Mashburn with their awards.

Gold is an aloof metal. You won't find it mixed inside minerals and ores, because it doesn't bond with oyer elements. Its flakes and nuggets are usually pure. (226)



Cheerleading



The Union College Cheerleading squad has changed drastically over the last four years but three seniors, who began their journeys as freshman, learned to grow and change with the program. Seniors Carrie Buck, Brittney Bailey and Raychel Smith have been cheering together since they first began their college experiences in August 2009. The three have built bonds that will continue beyond their cheerleading days and have learned a lot more about each other than they ever imagined they would.

Carrie Buck is a Secondary English Education major from Florence KY who traveled to Union in search of a good education and a small escape from home. Carrie began the program not knowing any of the squad but aspired to build many friendships. Carrie remembers her first encounter with Brittney being one that will provide her with laughs for many years to come. Carrie states "When I first met Brittney she took me in immediately explaining the methods of home extermination for baby bats. Being from the city I was intensely shocked when I heard the words "Tennis Rackets and Bug Spray" come out of Brittney's mouth with Raychel joining the conversation by shaking her head in agreement. From that moment on the three of us seemed to have a connection leading to a long lasting relationship."

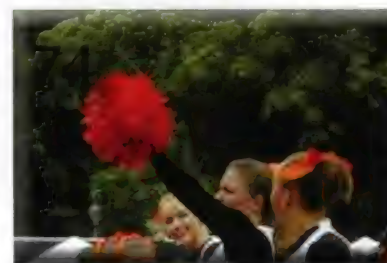


Brittney Bailey is also a Secondary English Education major who will graduate in May. Brittney is from Pineville KY only a short distance away from Union's Barbourville where she has lived all her life. Brittney cheered throughout her high school days and has loved the sport since she was a small child. When Brittney was asked about her cheerleading career at Union she quickly responded, "My favorite memories of cheerleading were our trips freshman and sophomore year to Myrtle Beach. I enjoyed the trips not only because we were named National Champions but because of the bonds and friendships I was able to make that will last a lifetime."

Raychel Smith is also an education major but her emphasis falls in elementary grades. She is from Barbourville KY and cannot imagine her life without cheerleading since it has always been a part of her life. Raychel was overly excited about cheering in college and being given the opportunity to try more difficult stunts that were not permitted in high school cheerleading. Raychel explained her emotions pertaining to the sport through very powerful words; she explains, "Cheering has always been my passion. I have always loved the pressure and stress of the sport. I love everything about it, from the late night practices to the 3-hour football games. I guess you can say cheerleading is in my blood. It takes hard work and dedication, but I wouldn't have it any other way!"



Tungsten has one of the most confounding chemical symbols, a big fat unaccountable W. It stands for wolfram, the German name for the metal.



Men's Basketball



First Row L-R: K. Bush, S. Gonzalez, D. Fernandez-Munkholm, J. Smith, Ryan Crowe, J. Strange, D. Thrope.
Second Row: Shaquille Morris, T. Broughton, A. Adams, T. Wagner, D. Johnson, T. Hall, S. Brown, D. Simpson, T. Smith, M. Thomas.





After going to the state tournament his senior year of high school, senior Josh Smith thought he would be headed to Georgetown College to play baseball. After a year he moved back, saying, "It wasn't what I thought it'd be." After playing intermurals and pickup games, he came back to open gym. During a summer of hard work, he broke his hand and was moved to the JV team. After Christmas in 2010, he was moved to the varsity team and the team ended up winning the conference championship. However, Josh said, "I don't wear my ring that much. I know that I really didn't do anything to earn that." In the season he only appeared in seven games total.

Another summer of hard work earned him time in all 31 games in the 2010-2011 season, starting four of those games. The season narrowly avoided disaster as the team started falling apart with people transferring or quitting. By the end of the season, there was barely a team left.

2012-2013 brought a new year and a new coach. Josh's dedication and hard work never faltered. He continued to be the "blue collar player" and wants to be remembered as the guy who "may not score 30 points but is on the floor at the bottom of the pile."



Women's Basketball



First row L-R: M. Clontz, S. Scruggs, K. Griffin, A. Taylor, A. Roberts, T. Wilson, L. Perkins, T. Atkinson, J. Thomas. Second Row: A. Vance, C. Thomas, H. Perkins, A. Jefferson, L. Waters, L. Nash, M. Rice, E. Karlsgodt, K. Pile, T. Curry.



Three time AAC player of the week, CoSIDA Academic All-American, named to both the All-AAC first team and All-AAC defensive team, the AAC Player of the Year and senior Lindsey Waters was more than an award winner. On the court, Lindsey led the team and the conference. She was #1 in the AAC, #3 in NAIA division II for blocks and rebounds and also #2 in the conference for scoring.

A transfer from Lindsey Wilson, Lindsey felt Union was a better fit for her. She has made friends and memories here at Union, including winning her first championship and going to nationals in 2012. She said, "It was just a good feeling. I know it's not the NCAA, but to us it is."

After graduation, Lindsey hopes to be remembered as a leader and an overall good person. She knows she will miss playing on Union's floor but she has had a great time. Lindsey closed the season with a total of 176 goals made, 107 free throws, 89 offensive rebounds, 198 defensive rebounds, 92 blocks, and a staggering total of 469 points in 29 games.



Technetium, Greek for 'artificial,' was the first man-made element (140).

Bowling



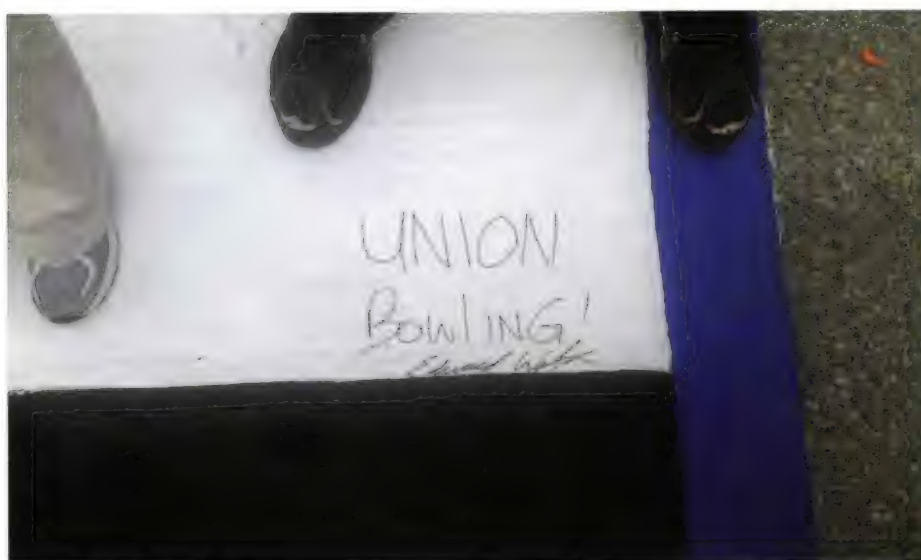
First Row L-R: K. Alexander, C. King, K. George. Second Row: B. Piper, M. Hill, J. Barbee, L. Everett, C. Gilliam. Third Row: D. Spann, J. Franks, E. Walsh, J. Courtney. Fourth Row: J. Durland, S. Dockery, K. Venis, J. Davenport.





The lights are low and the alley is already crowded with competitive bowlers, ready to start in on an eight hour or even longer day. Freshman Laurel Everett is one of these dedicated athletes. "People think bowlers aren't athletes but we work hard. We don't get many action shots because tournaments don't allow flash photography and there is little free time to take pictures anyway," Laurel argues. In her day to day routine, she includes cardio and weight training to have the endurance needed for these grueling tournaments. This isn't the only challenge though. The bowlers have to stay strong mentally, often a difficult task. Laurel explained, "These shots and oil patterns are designed to test you, and if you break down and give up because it's simply too hard, you've lost the battle. And that goes for your teammates as well - if your teammate is struggling and is ready to throw in the towel, you have to be there to pick them up, just like in any other sport, and get them back to where they want to be there and trying to win."

The team started clicking mentally mid-season. With 10 of the 16 bowlers freshmen, they had to adapt to the style of team-centric collegiate tournaments. Paired with the noise and crowd, the freshmen struggled. However, their scores started to improve once the team started to work together. Laurel added, "Chelsea, our coach, has also done amazing work to try and help us better our games and become the best bowlers we can. I can easily say without Chelsea, we wouldn't be where we are now. However, we certainly aren't finished growing, and we all hope to finish even higher next year."



"Some of the team worked at the Kentucky Speedway as a fundraiser and after they finished work they signed the finish line on the track!" -Laurel Everett

Humans have used soft, pliable lead since ancient times for projects like municipal water pipes. Lead's symbol on the periodic table, Pb, derives from the same Latin word that gave us "plumber." (124)



Golf



First Row L-R: R. Meier, B. Stuber, G. Bradley, B. Sharkey, A. Barber, D. Mills, T. Cooper. Second Row: E. Wyrick, D. Greene, W. King, A. Wright, T. Scott, T. Doolin, R. Gamble, A. Carruba.



Bottom-Up, L-R: A. Buxton, K. Nusz, D. Judd, B. Zins, S. Smith, K. Hensley



This man is eligible.

But he's not a bachelor, and his cell phone isn't due an upgrade. Wayne King is eligible, nonetheless—for NAIA play as a student-athlete. At 66 years old, this sophomore golfer from Paris, Ky., is the oldest Union College student in the school's history to have his name on an active players roster. Better make that two, because he also bowls.

While Wayne has been a member of the golf team since he came to Union as a freshman, he didn't become eligible until mid-October. After that milestone was reached, he expanded his competition opportunities by becoming a bowling team walk-on, further sealing his name in the history of Union College athletics.

So he's a sophomore, two-sport athlete who wasn't eligible during his freshman year? Sounds ambitious, but normal enough. On paper, Wayne's age is the only thing that separates him from most traditional college student-athletes.

Aside from iodized salt, fluorinated water is among the cheapest and most effective public health measures ever enacted, enabling most people who drank it to die with the own teeth for the first time in history.

His back-story, however, is anything but typical.

In 1965, during Wayne's senior year of high school, the draft kept him from graduating with his class. Even though he earned his GED a year later, being denied this rite of passage might be termed disappointing at the very least. But no one—not even Wayne—could have guessed that the ordeal would resurface nearly 50 years later to throw a wrench in his plans to play intercollegiate sports: an endeavor which would help position him for his ultimate goal of working with young athletes.

Eligibility evaded him for several reasons. To satisfy the requirements as an incoming freshman, Wayne needed several pieces of documentation, including a satisfactory grade-point-average or a class ranking among the top 50 percent. "When I went to school, they didn't have GPAs," Wayne says. And since he didn't officially graduate, he couldn't report a class rank.

Consequently, he had to meet requirements as a first-year college student.

Along with attending practices and traveling to every golf match he has time to attend ("I'm not sure I can miss classes two days in a row and get caught up," he says with a laugh), Wayne focuses his time on maintaining the 3.4 GPA he reported when his eligibility requirements were met. This number also safely poises him to graduate among the top 50 percent of the graduating class of 2015, when he expects to receive—during his first traditional commencement ceremony—his Bachelor of Arts degree in recreation management. "I almost have all my core classes complete, and I will graduate," Wayne says with confidence.

As for his more recent challenges with the bowling team, Wayne is willing to share information. "Just text me," he says, in typical, traditional-student fashion.

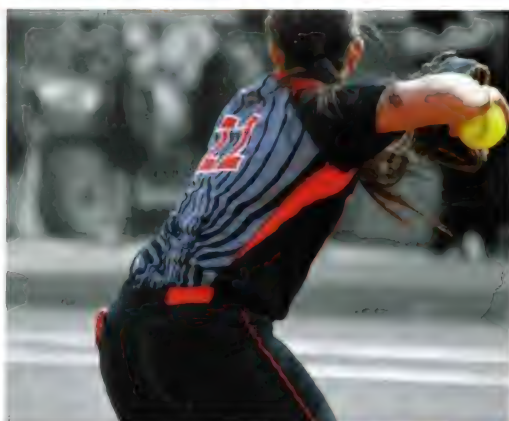
"I may never, ever play in an NAIA match, but I am on that team." And then, as an aside, he says, "I should've done this in 1990 when I retired from the Army." But he's doing it now. At last.
Story by Missy Reid



Softball



First Row L-R: K. Gray, E. Huff, Kayleen Gary, S. Edgell, A. Hampton, A. Greenwell, K. Perkins, A. Wojnowski, C. Campbell, D. Borum. Second Row: D. Nowak, Neysa Kelly, E. Weaver, G. Shauer, J. Cyrus, E. Cooper, H. Frisch, K. Morgan, K. Hammons, J. Vannover, R. Codgill, Morgan Johnson, B. Bishop.



2013 Second All-Conference team member Jamie Cyrus is a danger. She slugged her way into the record books, hitting three homeruns in a single game. Jamie also became the second player in the NAIA to hit three homers and marked the third grand slam in Union history. Jamie's big game stopped the ladies in an 11 game losing streak with a 13-11 win over Bryan. Of the 13 runs scored, Jamie drove in 7 and went 3-4 with a walk.



Also named to the Second All-Conference team was Ashley "Wojo" Wojnowski. A force on second base, Ashley is known for speed with 22 stolen bases out of 25 attempts. She also leads the team in runs scored with 38 on the season. The sophomore speedster also is ranked #7 in the NAIA for most assists per game with 79 in 41 games.



Radium's radioactivity charges the air around it electrically, glowing luminescent green. Radium is always hotter than its surroundings, because its radioactivity heats it up (249).



Baseball



First Row L-R: M. Acevedo, J. Burrell, G. Juarbe, B. Hartley, G. Fryear, T. Tye, J. Smith. Second Row: T. Young, J. King, J. Arnett, C. Lawson, K. Ferguson, T. Kottenbrock, D. Futuro, J. Lilly, B. Osborne, J. Riddle, L. Anderson, V. Sullivan, C. Nicholson, B. King, C. Jamerson. Third Row: J. Myneer, M. Mendez, J. Tomany, K. Williams, Z. Gross, J. Janutolo, T. Brake, N. Price, E. Nickell, T. Wheeler, A. Fuller, L. Collis, Z. Dillman, D. Hillard, T. Alexander.





It hasn't been a party for senior slugger Tyler Brake this season. A staple in the batting rotation, the first baseman struggled offensively after a late inning grand slam in the season opener against the Cumberland.

The set back of bad at-bats didn't stop Tyler in making history with four doubles in a single game against Georgetown. Past Bulldogs have gotten close to the record, six players have recorded three doubles but none could push ahead. Tyler also became the fourth player in NAIA history to reach the milestone. Coach Osborne was thrilled with Tyler's record, saying, "He's a four-year player for us and has worked hard day-in and day-out for us. This could not happen to a better player." As for the mid-week game, Union won on the run rule with a final score of 18-8. The record breaking game also helped propel Tyler to become Union Baseball's second NAIA Player of the Week in the program's history.



Radium's radioactivity charges the air around it electrically, glowing luniscent green. Radium is always hotter than its surroundings, because its radioactivity heats it up.

Inauguration



The inauguration for President Dr. Marcia Hawkins officially occurred on April 26th, 2013 but there was a week of activities preceding the Inauguration ceremony. There were three lectures, Repair Affair, the Spring Concert, a special service event, a pond revitalization event, a chapel service and the Bulldog ball--all in one week.



In the age of paper money the unique chemistry of metals like Europium helps governments combat counterfeiting. Depending on the molecule it's attached to, europium can emit red, green, or blue light. The European Union (EU), in fact, uses its eponymous element in the ink on its paper bills (231).

